10" Professional Radial Arm Saw

(Model RS830)

INSTRUCTION MANUAL

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IMPORTANT SAFETY INSTRUCTIONS

⚠WARNING Read and understand all warnings and operating instructions before using any tool or equipment. When using tools or equipment, basic safety precautions should always be followed to reduce the risk of personal injury. Improper operation, maintenance or modification of tools or equipment could result in serious injury and property damage. There are certain applications for which tools and equipment are designed. Delta Machinery strongly recommends that this product NOT be modified and/or used for any application other than for which it was designed.

If you have any questions relative to its application DO NOT use the product until you have written Delta Machinery and we have advised you.

Online contact form at **www.deltamachinery.com**

Postal Mail: Technical Service Manager
Delta Machinery
4825 Highway 45 North
Jackson, TN 38305
(IN CANADA: 125 Mural St. Suite 300, Richmond Hill, ON, L4B 1M4)

Information regarding the safe and proper operation of this tool is available from the following sources:

Power Tool Institute
1300 Sumner Avenue, Cleveland, OH 44115-2851
www.powertoolinstitute.org

National Safety Council
1121 Spring Lake Drive, Itasca, IL 60143-3201

American National Standards Institute, 25 West 43rd Street, 4 floor, New York, NY 10036 **www.ansi.org**
ANSI 01.1Safety Requirements for Woodworking Machines, and

the U.S. Department of Labor regulations **www.osha.gov**

SAVE THESE INSTRUCTIONS!

SAFETY GUIDELINES - DEFINITIONS

It is important for you to read and understand this manual. The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below are used to help you recognize this information.

⚠DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

CALIFORNIA PROPOSITION 65

⚠WARNING **SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES** contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

· lead from lead-based paints,
· crystalline silica from bricks and cement and other masonry products, and
· arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, always wear **NIOSH/OSHA** approved, properly fitting face mask or respirator when using such tools.

GENERAL SAFETY RULES

⚠WARNING READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.

IMPORTANT SAFETY INSTRUCTIONS

1. **FOR YOUR OWN SAFETY, READ THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learning the machine's application, limitations, and specific hazards will greatly minimize the possibility of accidents and injury.
2. **WEAR EYE AND HEARING PROTECTION. ALWAYS USE SAFETY GLASSES.** Everyday eyeglasses are NOT safety glasses. USE CERTIFIED SAFETY EQUIPMENT. Eye protection equipment should comply with ANSI Z87.1 standards. Hearing equipment should comply with ANSI S3.19 standards.
3. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
4. **DO NOT USE THE MACHINE IN A DANGEROUS ENVIRONMENT.** The use of power tools in damp or wet locations or in rain can cause shock or electrocution. Keep your work area well-lit to prevent tripping or placing arms, hands, and fingers in danger.
5. **MAINTAIN ALL TOOLS AND MACHINES IN PEAK CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
6. **CHECK FOR DAMAGED PARTS.** Before using the machine, check for any damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, and any other conditions that may affect its operation. A guard or any other part that is damaged **should be properly repaired or replaced.** Damaged parts can cause further damage to the machine and/or injury.
7. **KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
8. **KEEP CHILDREN AND VISITORS AWAY.** Your shop is a potentially dangerous environment. Children and visitors can be injured.
9. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that the switch is in the "OFF" position before plugging in the power cord. In the event of a power failure, move the switch to the "OFF" position. An accidental start-up can cause injury.
10. **USE THE GUARDS.** Check to see that all guards are in place, secured, and working correctly to reduce the risk of injury.
11. **REMOVE ADJUSTING KEYS AND WRENCHES BEFORE STARTING THE MACHINE.** Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
12. **USE THE RIGHT MACHINE.** Don't force a machine or an attachment to do a job for which it was not designed. Damage to the machine and/or injury may result.
13. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause damage to the machine or injury to the user.
14. **USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. See the Extension Cord Chart for the correct size depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
15. **SECURE THE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. Loss of control of a workpiece can cause injury.
16. **FEED THE WORKPIECE AGAINST THE DIRECTION OF THE ROTATION OF THE BLADE, CUTTER, OR ABRASIVE SURFACE.** Feeding it from the other direction will cause the workpiece to be thrown out at high speed.
17. **DON'T FORCE THE WORKPIECE ON THE MACHINE.** Damage to the machine and/or injury may result.
18. **DON'T OVERREACH.** Loss of balance can make you fall into a working machine, causing injury.
19. **NEVER STAND ON THE MACHINE.** Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
20. **NEVER LEAVE THE MACHINE RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave the machine until it comes to a complete stop. A child or visitor could be injured.
21. **TURN THE MACHINE "OFF", AND DISCONNECT THE MACHINE FROM THE POWER SOURCE** before installing or removing accessories, before adjusting or changing set-ups, or when making repairs. An accidental start-up can cause injury.
22. **MAKE YOUR WORKSHOP CHILDPROOF WITH PADLOCKS, MASTER SWITCHES, OR BY REMOVING STARTER KEYS.** The accidental start-up of a machine by a child or visitor could cause injury.
23. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE. DO NOT USE THE MACHINE WHEN YOU ARE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in injury.
24. **⚠WARNING USE OF THIS TOOL CAN GENERATE AND DISBURSE DUST OR OTHER AIRBORNE PARTICLES, INCLUDING WOOD DUST, CRYSTALLINE SILICA DUST AND ASBESTOS DUST.** Direct particles away from face and body. Always operate tool in well ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

ADDITIONAL SPECIFIC SAFETY RULES

⚠WARNING FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS INJURY.

1. **DO NOT OPERATE THIS MACHINE UNTIL** it is **assembled** and **installed** according to the instructions.
2. **OBTAIN ADVICE from your supervisor, instructor, or another qualified person** if you are not familiar with the operation of this machine.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections.
4. **USE THE GUARDS WHENEVER POSSIBLE.** Check to see that they are in place, secured, and working correctly.
5. **ENSURE THAT END PLATES ARE SECURELY FASTENED TO TRACK ARM** prior to use.
6. **TIGHTEN ALL CLAMP HANDLES** prior to use except for the motor carriage clamp. Tighten this clamp only for ripping operations.
7. **AVOID KICKBACK BY:**
   A. keeping blade sharp and free of rust and pitch.
   B. keeping blade parallel to the fence when ripping.
   C. using anti-kickback fingers when ripping. Lower the guard on the infeed end and adjust the anti-kickback attachment properly.
   D. never ripping a workpiece that is twisted or warped, or does not have a straight edge to guide along the fence.
   E. never sawing a large workpiece that cannot be controlled.
   F. never sawing a workpiece with loose knots or other flaws in the workpiece.
8. **REMOVE CUT-OFF PIECES AND SCRAPS** from the table before starting the saw. The vibration of the machine may cause them to move into the saw blade and be thrown out. After cutting, turn the machine off. Wait for the blade to come to a complete stop before removing any debris.
9. **NEVER** perform “free-hand” operations.Use the fence to position and guide the workpiece.
10. **KEEP FENCE HALVES** adjusted close to the blade for proper work support.
11. **KEEP ARMS, HANDS, AND FINGERS** away from the blade.
12. **NEVER REACH** around the saw blade.
13. **NEVER PERFORM** a “crossed arm” operation.
14. **PROPERLY SUPPORT LONG OR WIDE** workpieces.
15. **NEVER START THE MACHINE** with the workpiece against the blade.
16. **FOLLOW ALL RIPPING WARNINGS** on machine. NEVER FEED THE WORKPIECE into the anti-kickback end of the machine. FEED WORKPIECE against blade rotation.
17. **USE PUSH STICK(S)** for ripping a narrow workpiece.
18. **RETURN THE CUTTERHEAD** to the full rear position behind the fence after each crosscut operation.
19. **REPAIR OR REPLACE** damaged fence or work table.
20. **NEVER PERFORM LAYOUT, ASSEMBLY,** or set-up work on the table/work area when the machine is running.
21. **TURN THE MACHINE “OFF” AND DISCONNECT THE MACHINE** from the power source before installing or removing accessories, before adjusting or changing set-ups, or when making repairs.
22. **TURN THE MACHINE “OFF”,** disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE “OFF” POSITION** to prevent unauthorized use.
23. **ADDITIONAL INFORMATION** regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 (www.powertoolinstitute.com). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor OSHA 1910.213 Regulations.

SAVE THESE INSTRUCTIONS.

Refer to them often
and use them to instruct others.

POWER CONNECTIONS

A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug. Before connecting the machine to the power line, make sure the switch (s) is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. All line connections should make good contact. Running on low voltage will damage the machine.

⚠DANGER **DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.**

MOTOR SPECIFICATIONS

Your machine is wired for 120 volts, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS

⚠DANGER **THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.**

1. All grounded, cord-connected machines:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This machine is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine's plug, as shown in Fig. A.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected machines intended for use on a supply circuit having a nominal rating less than 150 volts:

If the machine is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A**,** the machine will have a grounding plug that looks like the plug illustrated in Fig. A**.** A temporary adapter, which looks like the adapter illustrated in Fig. B, may be used to connect this plug to a matching 2-conductor receptacle as shown in Fig. B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. Whenever the adapter is used, it must be held in place with a metal screw.

NOTE: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.

⚠DANGER **IN ALL CASES, MAKE CERTAIN THAT THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.**

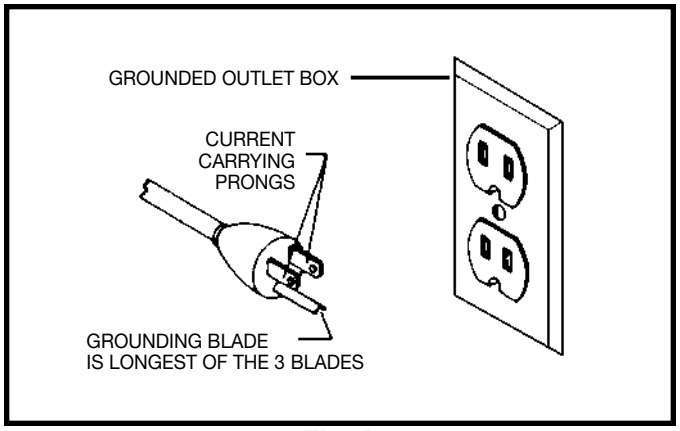

Fig. A

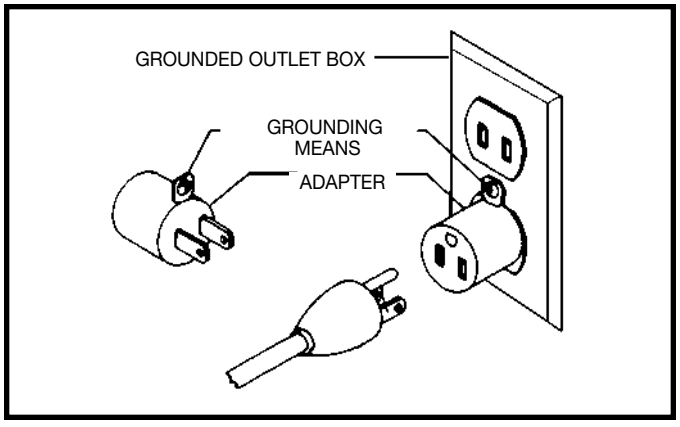

Fig. B

3. 240 VOLT SINGLE PHASE OPERATION

The motor supplied with your machine is a dual voltage, 120/240 volt motor. It is shipped ready-to-run for 120 volt operation. However, it can be converted for 240 volt operation.

If you desire to operate your saw at 240 volts, it is necessary to reposition voltage changing switch in the motor junction box (B) Fig. D. Proceed as follows:

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.
2. Remove screw (A) Fig. D, and remove nameplate cover (B).
3. Carefully slide switch (C) Fig. E, in motor junction box to read 240. Replace nameplate cover and screw which were removed in **STEP 2**.
4. It is also necessary to replace the 120 volt plug supplied with the motor with a UL/CSA listed plug suitable for 240 volts and the rated current of the saw.

A qualified electrician should do the conversion, or the machine can be taken to an Authorized Delta Service Center. The machine must conform to the National Electric Code and all local codes and ordinances after the 240 volt plug is assembled.

Be sure the 240 volt plug is only used in an outlet having the same configuration as the plug illustrated in Fig. C. No adapter should be used with the 240 volt plug.

⚠WARNING IN ALL CASES, MAKE CERTAIN THAT THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.

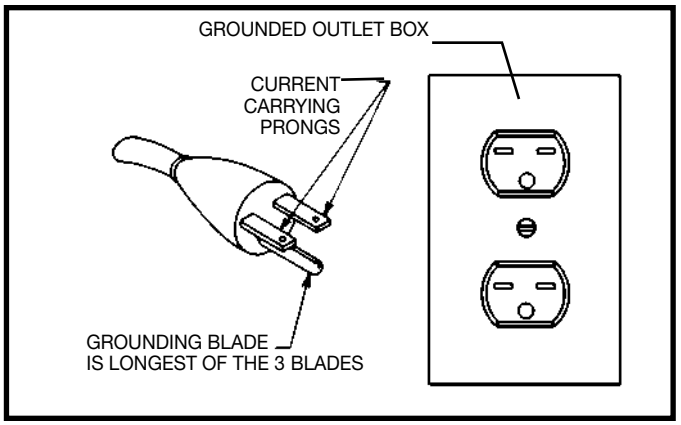

Fig. C

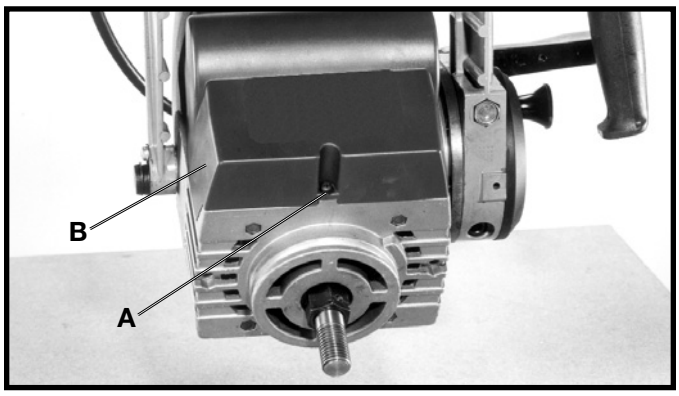

Fig. D

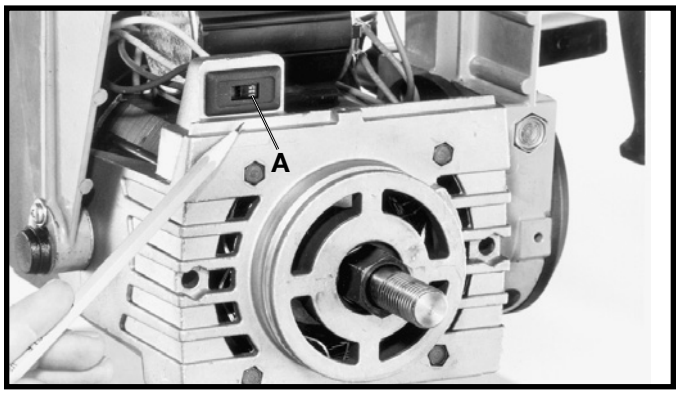

Fig. E

EXTENSION CORDS

⚠WARNING Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. D-1 or D-2, shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES

Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. D-1

MINIMUM GAUGE EXTENSION CORD
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES

Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	240	up to 50	18 AWG
0-6	240	50-100	16 AWG
0-6	240	100-200	16 AWG
0-6	240	200-300	14 AWG
6-10	240	up to 50	18 AWG
6-10	240	50-100	16 AWG
6-10	240	100-200	14 AWG
6-10	240	200-300	12 AWG
10-12	240	up to 50	16 AWG
10-12	240	50-100	16 AWG
10-12	240	100-200	14 AWG
10-12	240	200-300	12 AWG
12-16	240	up to 50	14 AWG
12-16	240	50-100	12 AWG
12-16	240	GREATER THAN 100 FEET NOT RECOMMENDED	

Fig. D-2

FUNCTIONAL DESCRIPTION

FOREWORD

Delta ShopMaster Model RS830 is a 10" (254mm) Professional Radial Arm Saw with maximum cutting capacity of 16" (406mm) crosscut, 2-3/4" (70mm) depth at 90° and 2-1/2" (64mm) depth at 45° bevel. It is designed with positive bevel stops at 0°, 45° and 90° and positive miter stops at 0° and 45° both right and left. Unit includes; 1-1/2 hp 120/240V motor, automatic blade brake, saw blade, wrenches, steel stand, cast-iron track and extra-large table.

NOTICE: The photo on the manual cover illustarates the current production model. All other illustrations contained in the manual are representative only and may not depict the actual labeling or accessories included. These are are intended to illustrate technique only.

CARTON CONTENTS

UNPACKING AND CLEANING

Carefully unpack the machine and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

1. The saw is packed at the factory with support blocks (A) Fig. 1, under the cutter-head (B), and track arm (C). Shipping boards (D) Fig. 1 are fastened to saw base (G). To prevent damage during shipment, the track arm elevating knob (H) is disassembled from lever (E). Before proceeding, insert post of knob (H) Fig. 2, through hole in lever (E) and assemble E-ring (K), to slot in post.

2. The support blocks (A) Fig. 1, can be removed by rotating track arm elevating knob (H) clockwise and the shipping boards (D) can be removed by removing hold-down screws (not shown), which are located inside saw base. Discard the support blocks (A) and shipping boards (D).

3 Fig. 3, illustrates the saw with support blocks and shipping boards removed.

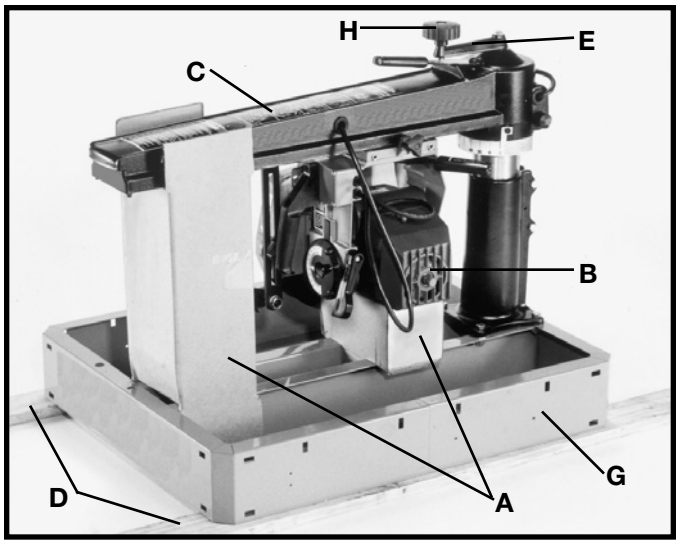

Fig. 1

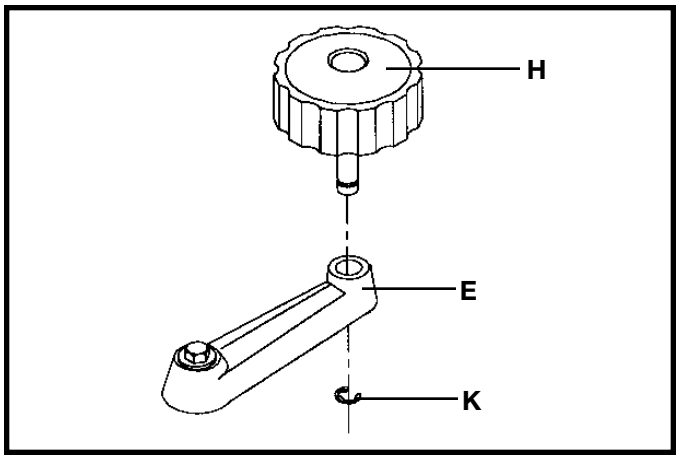

Fig. 2

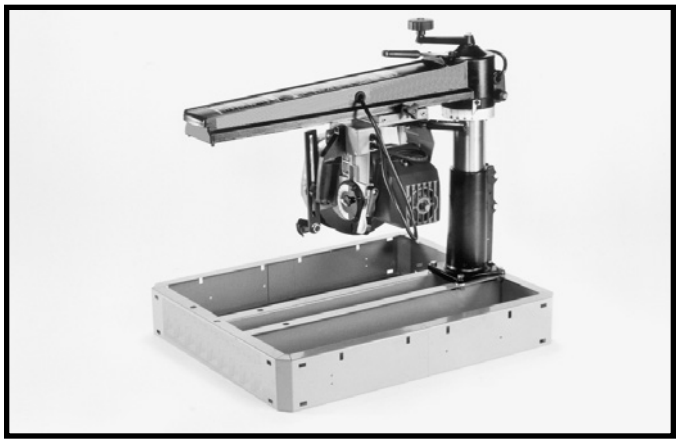

Fig. 3

RADIAL ARM SAW PARTS

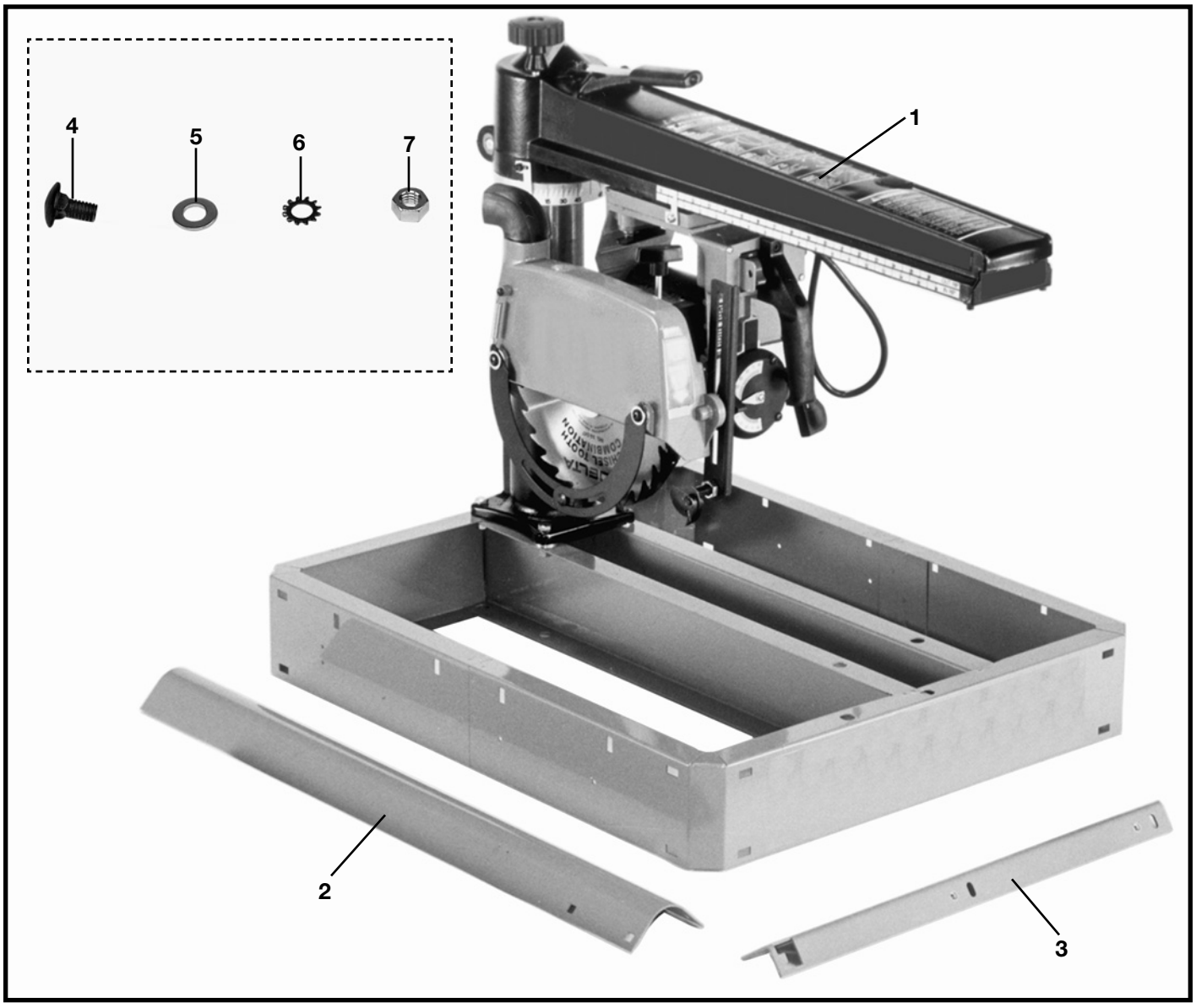

Fig. 4

1. Radial Arm Saw
2. Legs (4)
3. Table Supports (2)
4. 5/16-18x5/8" Carriage Head Screws (16)
5. 5/16" Flat Washers (16)
6. 5/16" External Tooth Lockwashers (16)
7. 5/16-18 Hex Nuts (16)

TABLE BOARD PARTS

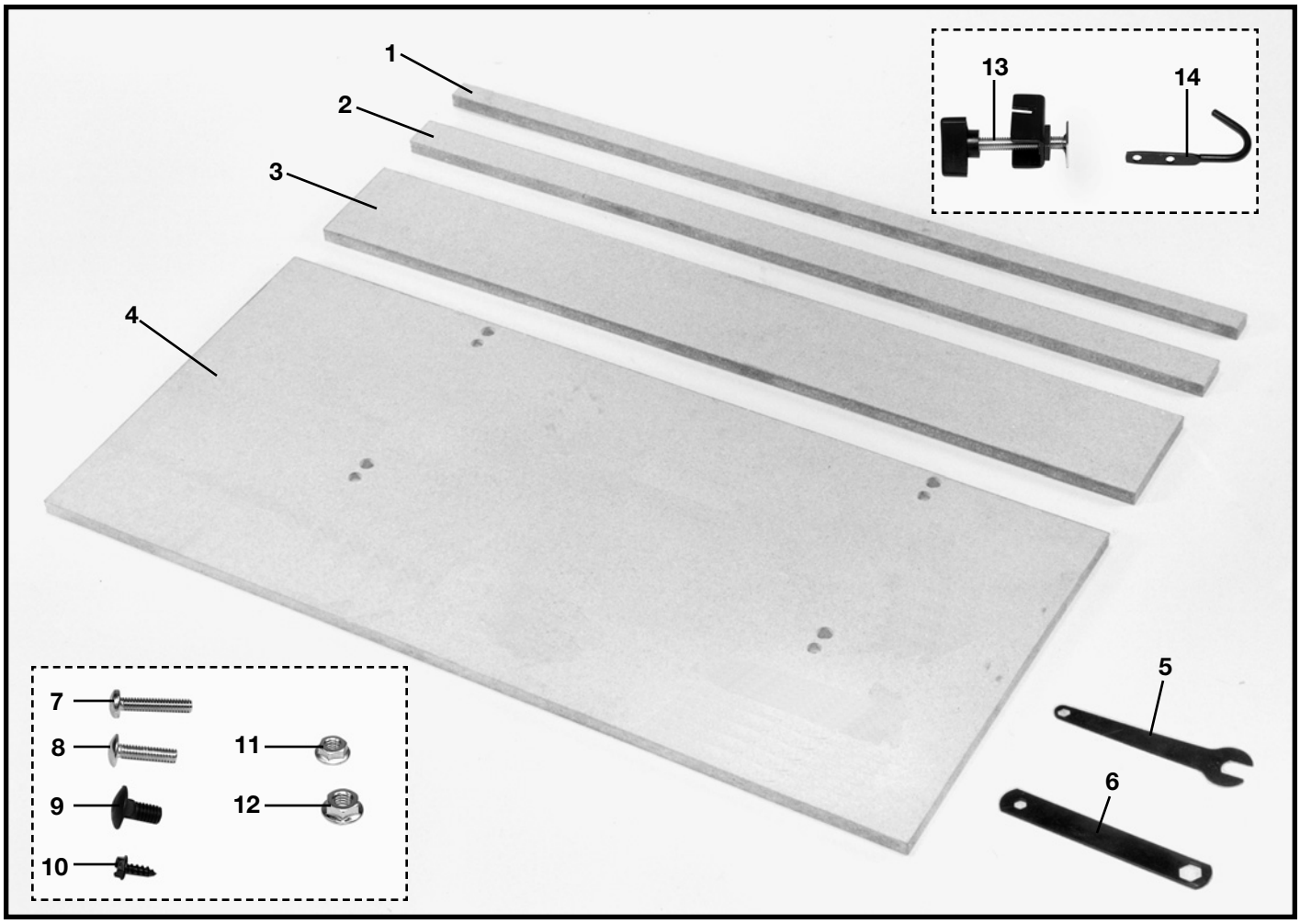

Fig. 5

1. Fence Board
2. Middle Table Board
3. Rear Table Board
4. Front Table Board
5. 7/8" Open End - 1/2" Box Wrench
6. 7/8" x 1/2" Box Wrench
7. 1/4-20x1¼" Round Head Screw (4)
8. 1/4-20x1" Round Head Screw (4)
9. 5/16-18x5/8" Carriage Head Screw (6)
10. #10x1/2" Sheet Metal Screw (2)
11. 1/4-20 Flange Hex Nut (4)
12. 5/16-18 Flange Hex Nut (6)
13. Table Board Clamp (2)
14. Wrench Hook

GUIDE TO PARTS

The following is an explanation of the operating controls of the Delta 10" Radial Saw. We suggest you study these explanations carefully to familiarize yourself with the controls before turning on the power. Doing otherwise may cause damage to the saw or personal injury (Figs. 5B and 5C).

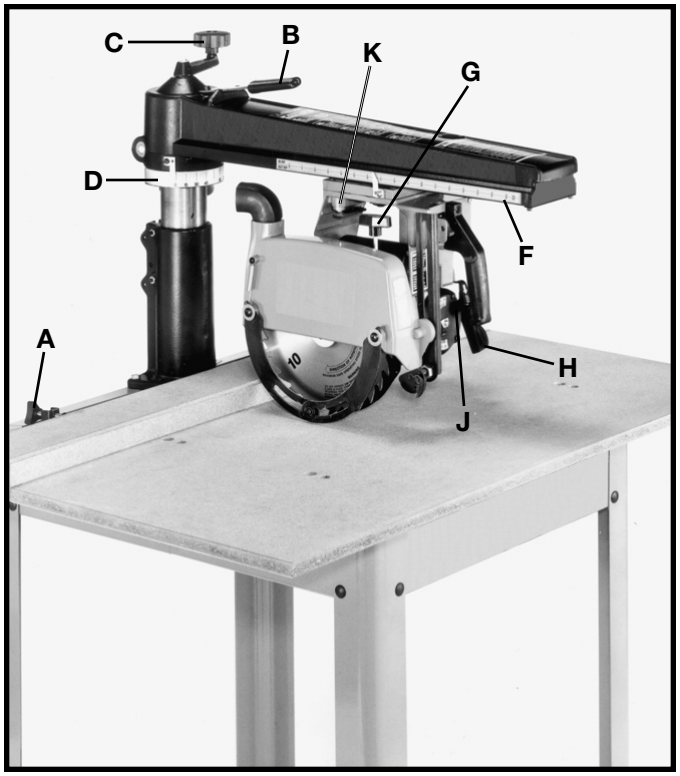

Fig. 5B

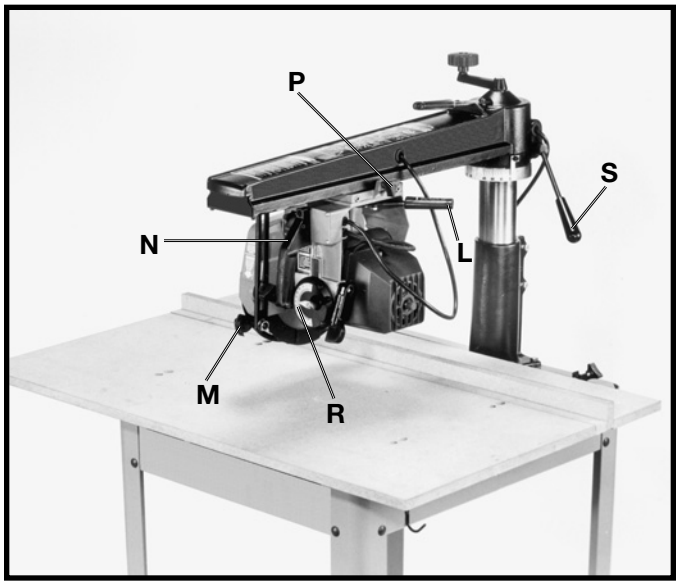

Fig. 5C

A. TABLE CLAMP KNOBS. Allows the operator to quickly set the desired fence position. Fig. 5B

B. TRACK ARM INDEXING RELEASE HANDLE. Releases the indexing pin from the 0 degree and 45 degree positions to allow the arm to rotate. Depress handle to release the index pin. Fig. 5B

C. TRACK ARM ELEVATING HANDLE. Controls the depth-of-cut in all operations. Turn the handle clockwise to raise or counterclockwise to lower the track arm. Fig. 5B

D. MITER SCALE. Indicates degrees left and right for setting track arm to desired miter angle. Fig.5B

F. RIP SCALE. Indicates the in and out rip positions of the cutter-head. Fig. 5B

G. BLADE GUARD CLAMP KNOB. Clamps the blade guard at rotated positions for ripping. Fig. 5B

H. BEVEL CLAMP HANDLE. Controls tilt of motor for bevel cutting operations. Locks motor at any desired angle on the bevel scale. Lift handle to loosen and push down to lock. Fig. 5B

J. BEVEL INDEX RELEASE KNOB. Locates 0 degree, 45 degree, and 90 degree. Positions the motor for bevel setting. When tilting the motor for bevel cutting, the bevel clamp handle must first be loosened. To release the index pull out on the release knob. Fig. 5B

K. YOKE INDEXING RELEASE LEVER. Locates each 90 degree position of the yoke for ripping or cross-cutting operations. When rotating the yoke, the yoke clamp handle must first be loose. Push the release lever either up or down to release the indexing pin. Fig. 5B

L. YOKE CLAMP HANDLE. The yoke clamp handle must be loose when rotating the yoke between the rip and cross-cutting position. Pull the handle to release and push it to lock. Fig. 5C

M. ANTI-KICKBACK DEVICE. When ripping, the yoke is positioned and clamped so that the blade is parallel to the fence. The rear of the blade guard is rotated until it almost touches the workpiece. The anti-kickback rod is then lowered so that the fingers catch and hold the workpiece. Never rip from the anti-kickback end of the blade guard. Fig. 5C

N. ON-OFF SWITCH. Conveniently located switch can be turned on or off in an instant for added operation protection. Switch also can be locked in the off position to prevent unauthorized use using an accessory padlock. Fig. 5C

P. CUTTING-HEAD CLAMP KNOB. Locks cutting-head at any position on the track arm. When ripping the cutting-head, clamp knob must be tight. Fig. 5C

R. BEVEL SCALE. Indicates degrees of rotation for setting motor bevel positions. Fig. 5C

S. TRACK ARM CLAMP HANDLE. Controls rotation of track arm for all miter cutting operations. Locks track arm at any miter angle position. To rotate track arm to the right, loosen clamp handle and rotate arm. The arm will stop at 45 degrees. To rotate past 45 degrees, depress indexing release handle and continue to rotate; arm will only rotate an additional 5 degrees. To rotate to the left, the operation is the same except the indexing release handle must be depressed to start rotating. Fig. 5C

ASSEMBLY

⚠WARNING FOR YOUR OWN SAFETY, DO NOT CONNECT THE MACHINE TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU READ AND UNDERSTAND THE ENTIRE INSTRUCTION MANUAL.

ASSEMBLY TOOLS REQUIRED

7/8" Open End - 1/2" Box Wrench (included)
7/8" x 1/2" Box Wrench (included)
1/2" and 3/8" Wrenches, Open End or Socket
Flathead Screwdriver

ASSEMBLY TIME ESTIMATE

Assembly for this machine takes approximately 2-3 hours.

LEGS TO SAW BASE

1. Loosen lock knob (A) Fig. 8, and move cutting-head (B) to the rear position as shown. Then tighten knob (A).

2. **⚠CAUTION MAKE CERTAIN THE CUTTING-HEAD IS CLAMPED SECURELY AT THE BACK OF THE TRACK ARM**.

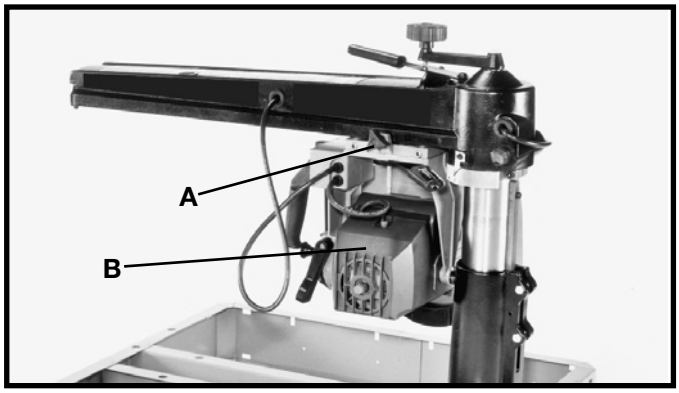

Fig. 8

3. Place Radial Arm Saw on its back and assemble legs (C) Fig. 9 (three of which are shown assembled) to each corner of saw base (D) using sixteen 5/16-18 x 5/8" carriage head screws, 5/16" flat washers, 5/16" external tooth lockwashers, and 5/16-18 hex nuts. Place flat washer on bolt. Insert bolt through holes then assemble lockwasher and nut. Hand tighten, hardware at this time but do not completely tighten.

4. Stand the saw in the upright position and securely tighten all stand hardware.

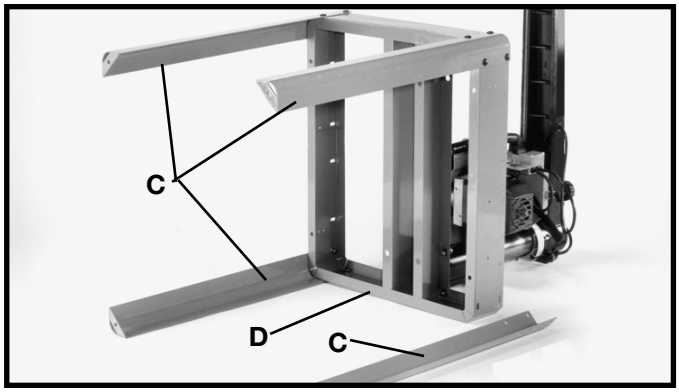

Fig. 9

WRENCH HOOK TO SAW BASE

Assemble wrench hook (K) Fig. 10, to the front right (as shown), or back left, side of saw base (D), using two #10 x 1/2" sheet metal screws.

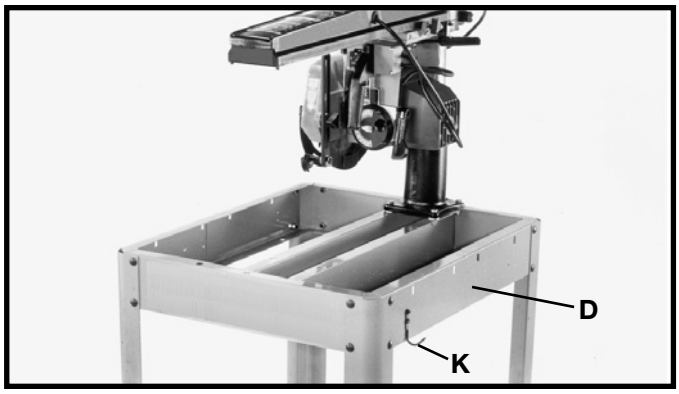

Fig. 10

REMOVING BLADE AND BLADE GUARD FROM SAW

1. Loosen blade guard clamp knob (A) Fig. 11, and rotate blade guard (B) to the position shown.

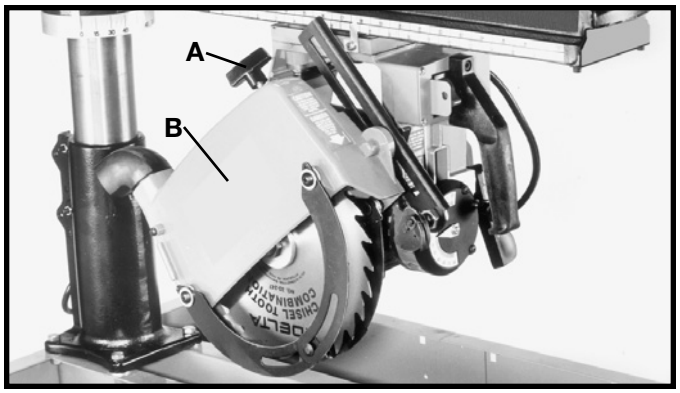

Fig. 11

2. With wrenches (C) Fig. 12, loosen arbor nut (D) as much as possible. **NOTE: Arbor nut has left hand threads**.

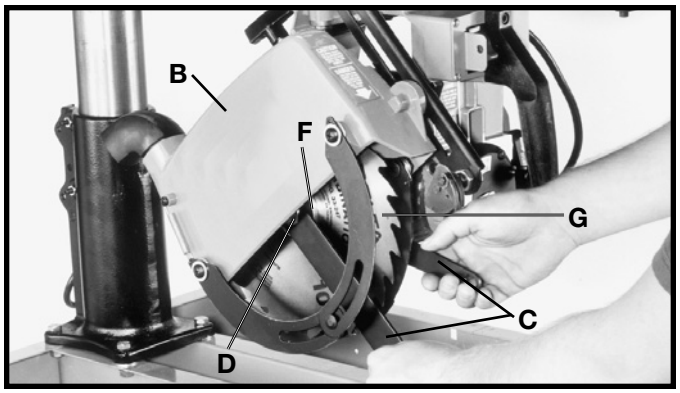

Fig. 12

3. Lift cam (E) Fig. 13, which holds the blade guard (B) Fig. 12, in position and move the blade guard (B), outer blade flange (F), and blade (G) outward.

Fig. 13

4. Lift blade guard (B) Fig. 14, and remove arbor nut (D), outer blade flange (F), and blade (G). Then remove blade guard (B).

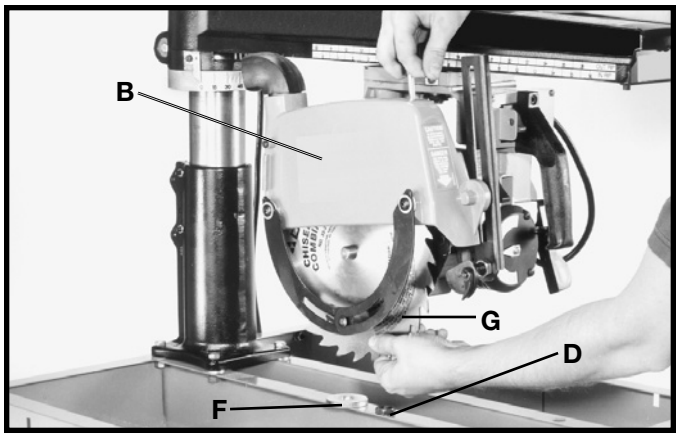

Fig. 14

TABLE SUPPORTS

1. Place front table board (A) Fig. 16, on a stable surface with counter-bored holes facing down, as shown.

2. Fasten left and right table supports (B) Fig. 16, to bottom of front table board (A) as shown, by inserting four 1/4-20x1" round head screws up through counterbored holes (D), in table board (A) and table supports (B). Secure in place using four 1/4-20 flanged hex nuts. Do not completely tighten nuts at this time.

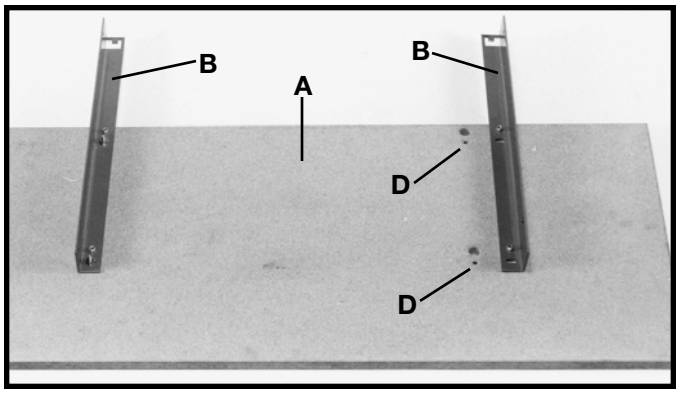

Fig. 16

3. Place front table board (A) Fig. 17, onto saw base (G), so that table supports (B) straddle the outside of saw base (G) and three holes (H) in each table support (B) line up with three slots (J) in each side of saw base (G) as shown.

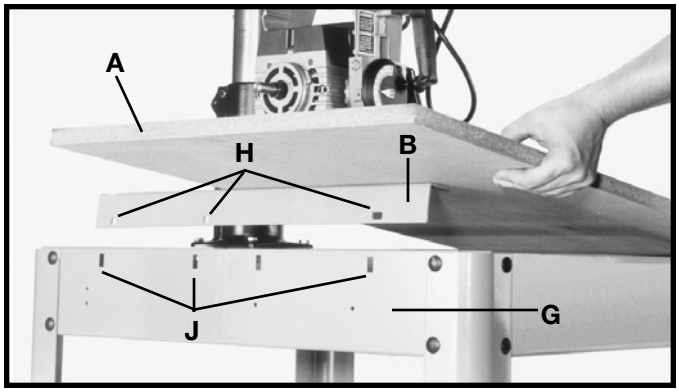

Fig. 17

4. Secure table supports, one of which is shown at (B) Fig. 18, to each side of saw base using six 5/16-18x5/8" carriage head screws (L) and six 5/16-18 flanged hex nuts. Do not completely tighten nuts at this time. **IMPORTANT: Insert screws through table supports and saw base from the outside.**

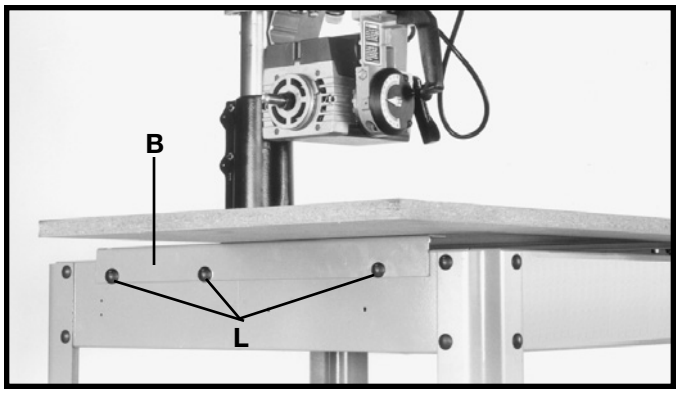

Fig. 18

5. Using a combination square (M) Fig 20, check the left and right front edge of table board (A) to make certain both sides are the same distance from the edge of each table support (B) Fig. 20.

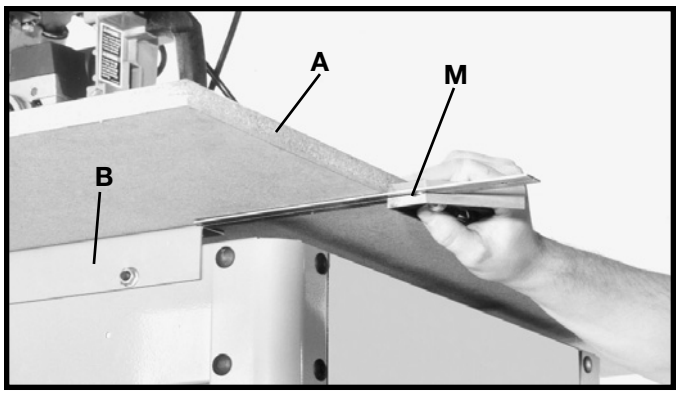

Fig. 20

6. When both right and left edges of the table board are the same distance from the table supports, tighten four screws located in holes (N) Fig. 21, of front table board (A).

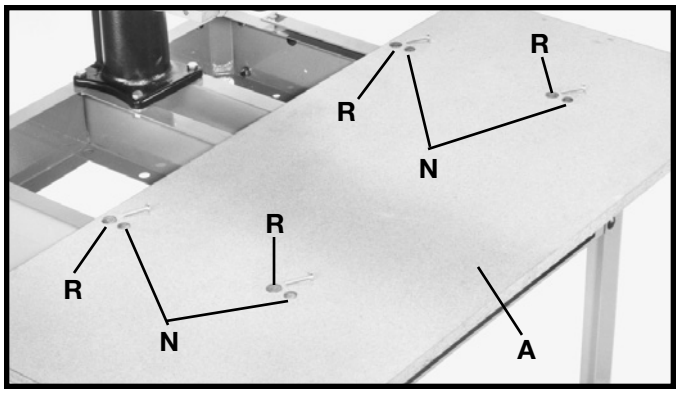

Fig. 21

7. Insert four 1/4-20x1-1/4" round head screws (P) Fig. 22, into holes (R) Figs. 21 and 22, of the table board as shown, and tighten each of the screws until each corner of the table board raises approximately 1/8".

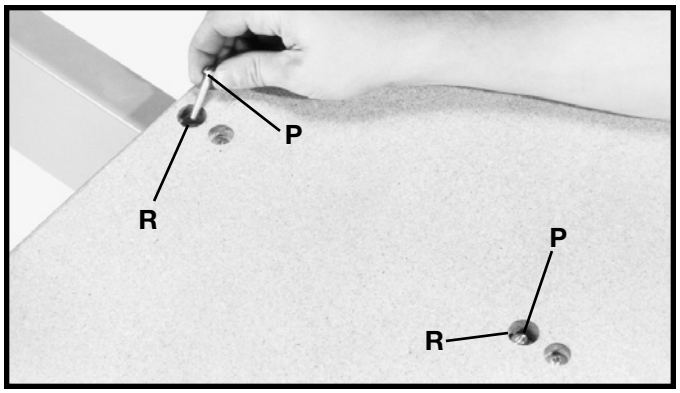

Fig. 22

8. Loosen bevel clamp lever (S) Fig. 23, pull out bevel index knob (T), and rotate motor (V) to the vertical position as shown, until bevel index engages. Then tighten bevel clamp lever (S). **NOTE: If the motor shaft contacts the table board before the motor is fully rotated, raise the track arm (X) Fig. 24, by turning elevating handle (C)**.

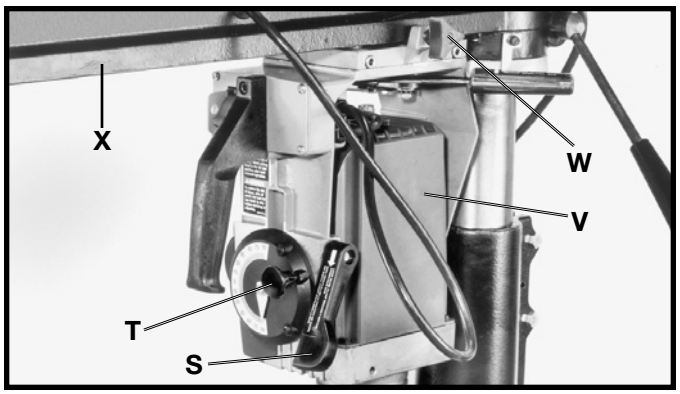

Fig. 23

9. Loosen cutting-head clamp knob (W) Fig. 23, and move cutting-head to the front of track arm (X). Then tighten cutting-head clamp knob (W).

10. Loosen track arm clamp handle (Y) Fig. 24. **NOTE:** Track clamp handle (Y) Fig. 24, has left handed threads. Press down on indexing release handle (Z) Fig. 24, and pivot track arm (X) Fig. 24, to the left until motor shaft (B) Fig. 25, is near front left adjustment screw (P) Fig. 25, of table board (A) Fig. 25, as shown. Then tighten track arm clamp handle (Y) Fig. 24.

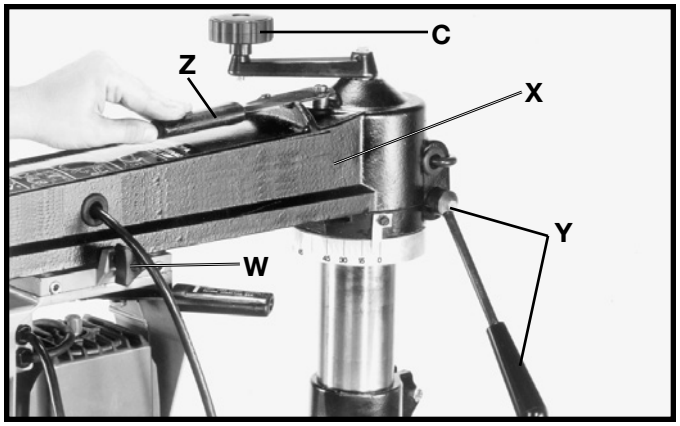

Fig. 24

11. Place an arbor wrench (D) Fig. 25, between table board (A) and motor shaft (B). Lower track arm (X) Fig. 24, by turning elevating handle (C) counterclockwise until motor shaft (B) Fig. 25, barely touches arbor wrench.

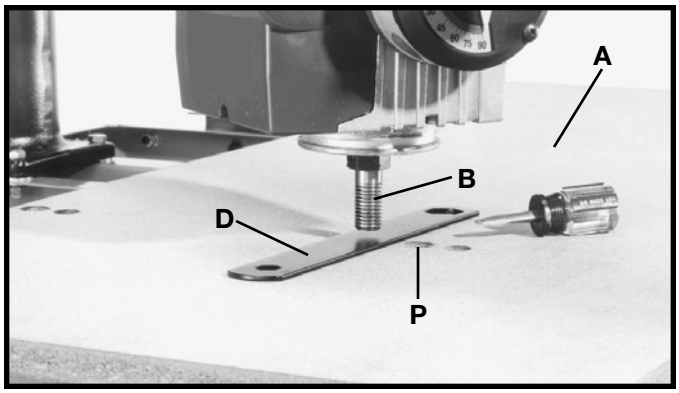

Fig. 25

12. Check the height of the table board above the other three table board adjustment screws (E) Fig. 26, by re-positioning track arm (X), and cutting-head assembly (V) until the highest point of the table is determined. **NOTE: MAKE CERTAIN CUTTING-HEAD CLAMP KNOB (W) FIG. 27 AND TRACK ARM CLAMP HANDLE (Y) ARE TIGHTENED WHEN MOTOR SHAFT IS LOCATED ABOVE EACH OF THE ADJUSTMENT SCREWS. DO NOT CHANGE HEIGHT OF TRACK ARM (X) FIG. 26, UNTIL HIGHEST SCREW IS DETERMINED, AND ALL FOUR CORNERS OF THE TABLE BOARD HAVE BEEN ADJUSTED**.

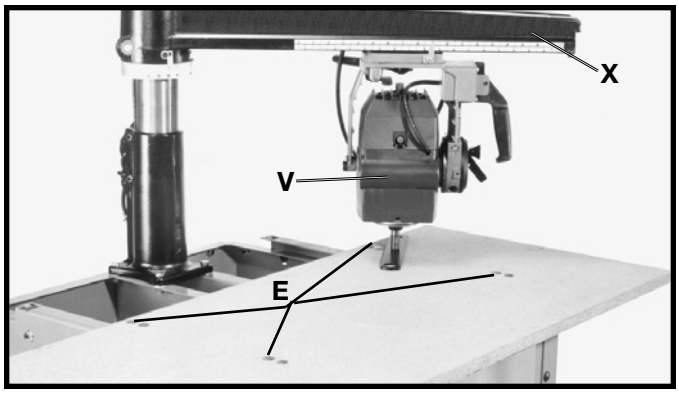

Fig. 26

13. Position the motor shaft back over the three lower corners of the table board and adjust the table adjustment screws (E) Fig. 26, until the arbor wrench fits accordingly between the arbor shaft and table board in each location.

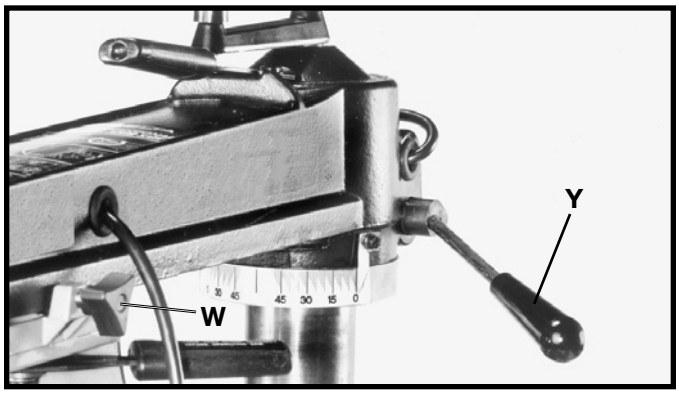

Fig. 27

14. Once the table board (A) Fig. 28, is properly adjusted, tighten three screws (G) on each side of saw base (H). Then return track arm (X) and motor (V) to the 90 degree position as shown, and tighten bevel clamp lever (S) and track arm clamp handle (Y) Fig. 27.

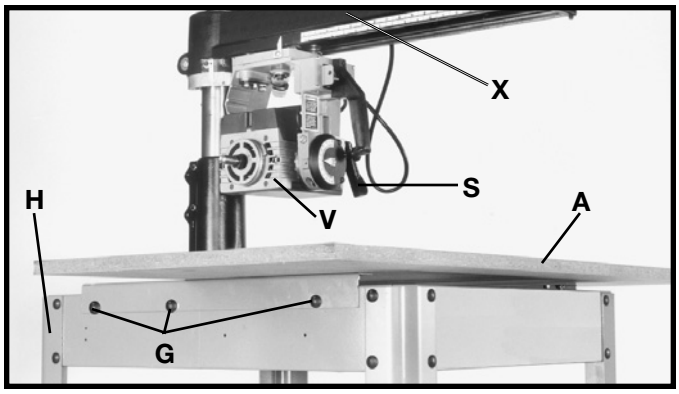

Fig. 28

TABLE BOARD CLAMPS AND TABLE BOARDS

1. Locate table board clamps (A) Fig. 29, and insert one clamp into each of the slotted holes (B) located at the rear of each table support bracket (C) as shown in Fig. 30.

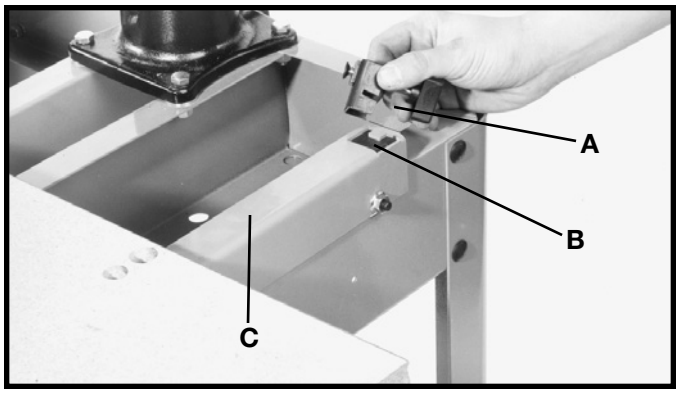

Fig. 29

2. Turn adjusting screw (D) Fig. 30 counter clockwise, so that the knobs (A) are in the rear position as shown.

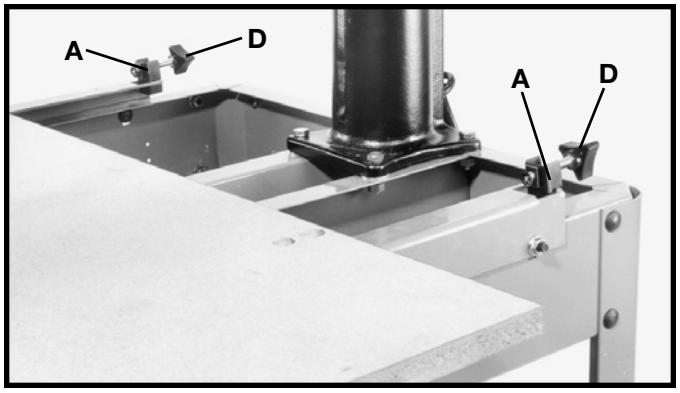

Fig. 30

3. Place 1-1/4" wide board (E) Fig. 31, against front table board (G), and 5-3/4" wide board (J) against 1-1/4" wide board (E), place the 1-3/4" wide board (H) in the upright position against the 5-3/4" wide board (J) as shown. Then tighten knobs (D), until the table boards are securely clamped in position.

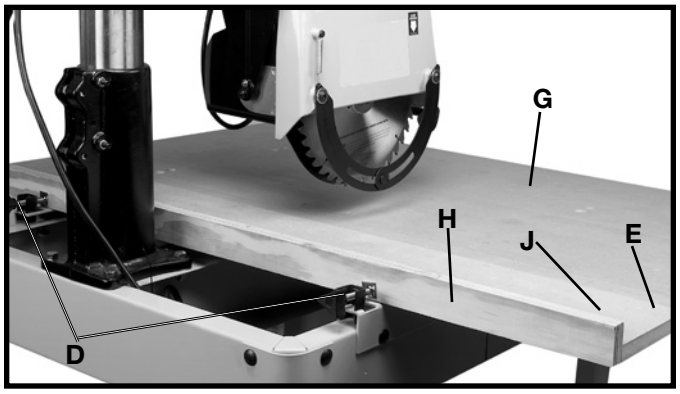

Fig. 31

ADJUSTING AND CHECKING SAW BLADE TRAVEL SQUARE TO FENCE

1. **WARNING** **DISCONNECT MACHINE FROM POWER SOURCE**.

2. Raise track arm (A) Fig. 32, by turning elevating handle (B) until the blade (C) can be assembled on the motor shaft. Then tighten arbor nut (D) using the wrenches supplied.

3. Place a framing square (E) Fig. 32, against fence (H) as shown, and lower track arm (A) until the blade just clears the table surface.

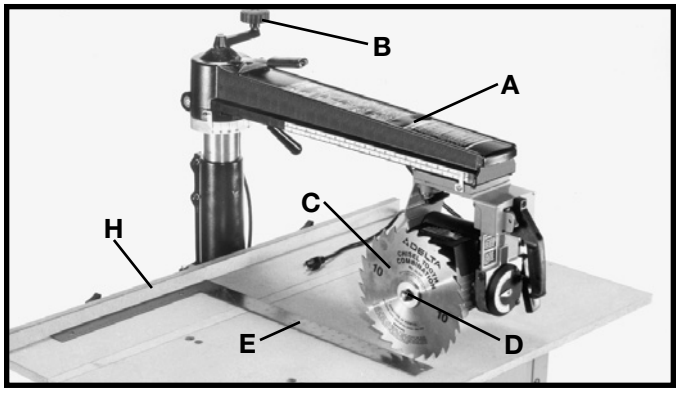

Fig. 32

4. Loosen cutting-head clamp knob (S) Fig. 33, and slide cutting-head (T) the entire length of track arm (A) as shown to determine if blade (C) travels parallel to the square (E).

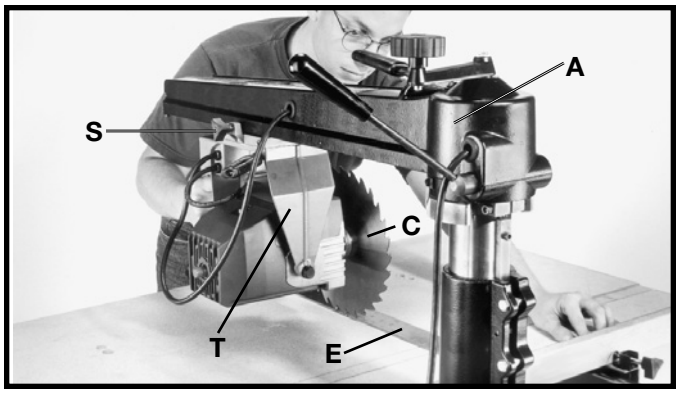

Fig. 33

5. If an adjustment is necessary, loosen index ring locking screw (J) Fig. 34, and track arm clamp handle (K).

6. Rotate track arm (A) Fig. 33, until blade (C) travels parallel to square (E). Then tighten track arm clamp handle (K) Fig. 34.

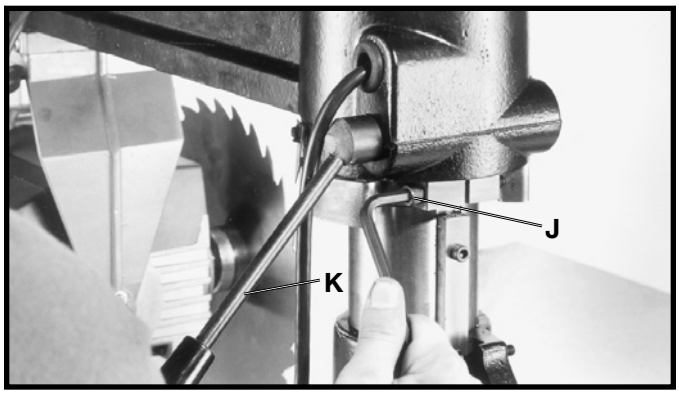

Fig. 34

7. With track arm clamp handle (K) Fig. 35, tightened, rotate index ring (L) counterclockwise until it stops. Then tighten index ring locking screw (J) Fig. 36.

Fig. 35

8. There are two miter index pointers, one of which is shown at (M) Fig. 36. Adjust as follows: loosen screw (N) and move pointer (M) until it lines up with the “zero” mark on the miter scale (P). Then tighten screw (N). Adjust the miter index pointer located on the other side of column (R) in the same manner.

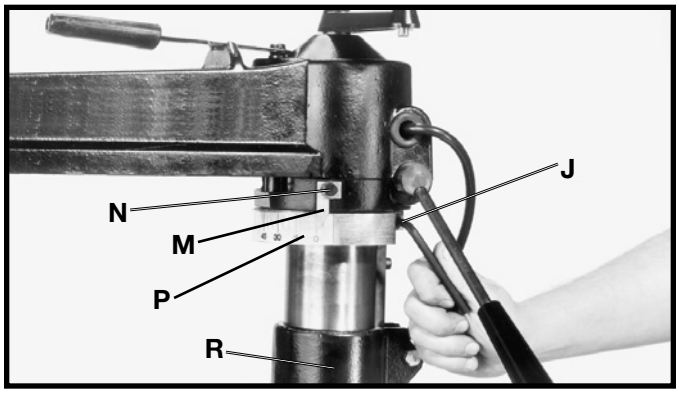

Fig. 36

REMOVING "HEELING" IN SAW BLADE CUT

Even though the cutting-head travel may be perfectly aligned at 90 degrees to the fence, the blade itself may not be 90 degrees or square with the fence, as shown in Fig. 37. This condition is known as "heeling."

To check and adjust, proceed as follows:

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.

2. Install saw blade without guard.

3. Replace the fence with a flat piece of 3/4" wood (A) Fig. 38, at least 5" high. Tighten table board clamps.

4. Place three identical pieces of wood (B) Fig. 38, on the table and lay a framing square on them so that the short arm is flush against the fence and the long arm is against the blade as shown. Be sure square is between the teeth of the blade.

5. If the blade is not parallel to the square, an adjustment is necessary. Release the yoke clamp handle (C) Fig. 39, and slightly loosen two hex head screws (D). Swivel the yoke until the blade is parallel with the square and tighten yoke clamp handle (C). Then tighten two hex screws (D) Fig. 39.

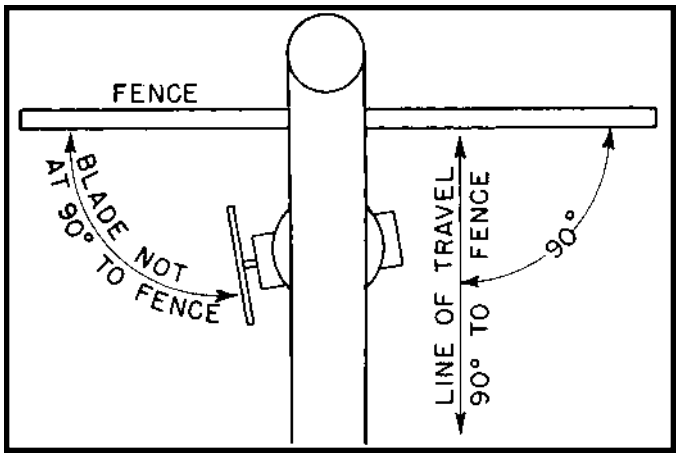

Fig. 37

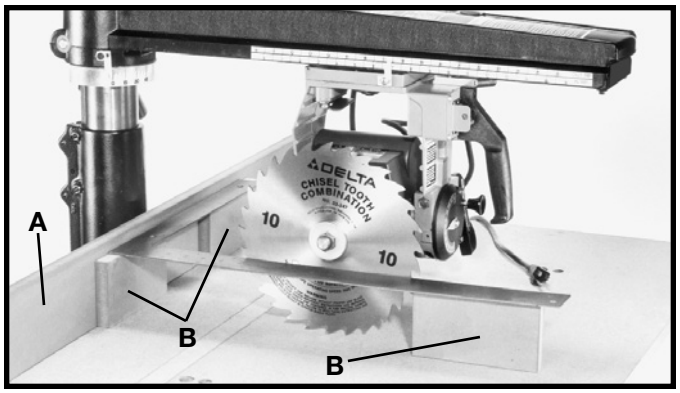

Fig. 38

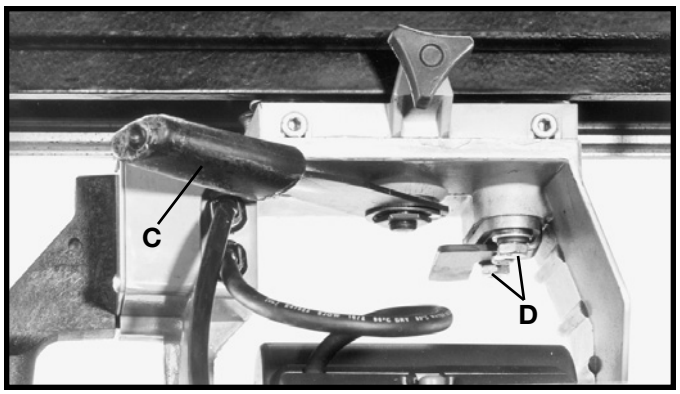

Fig. 39

CHECKING AND ADJUSTING SAW BLADE SQUARE TO TABLE

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.

2. Assemble the inner blade flange, saw blade, outer blade flange, and arbor nut on saw arbor.

3. Place the cutting-head in a cross-cut position as shown in Fig. 41. Lower track arm until the saw blade is just clear of the table and slide the cutting-head forward until it is positioned over the front table board; clamp the cutting-head in position as shown in Fig. 41.

4. Make certain the bevel index knob (A) Fig. 40, is engaged and the motor is in a horizontal position. Tighten bevel clamp handle (C).

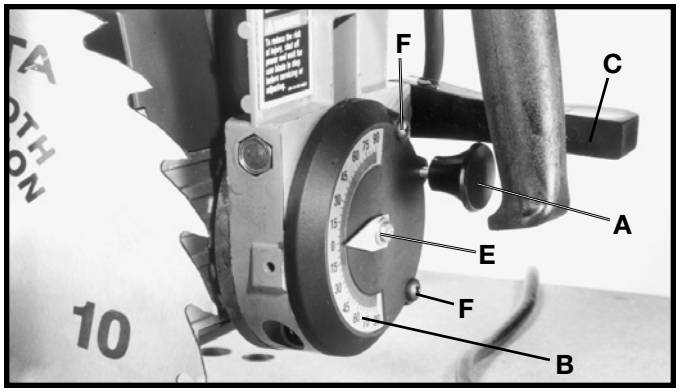

Fig. 40

5. Place a square (D) Fig. 41, on the table and against the saw blade, as shown, and check to see if the blade is square with the table. **NOTE: The square should rest between two teeth of the saw blade**.

6. If an adjustment is necessary, make certain bevel clamp lever (C) Fig. 40, is tight. Remove screw, flat washer, and pointer (E) Fig. 40. Remove two screws (F) Fig. 40, and bevel scale plate (H) Fig. 42, with index knob (A).

7. Loosen four hex head screws (G) Fig. 42. Tilt the motor until the saw blade is flush with the square. Tighten four hex head screws (G).

8. Replace bevel scale plate (H) Fig. 42, with bevel index release knob (A), two screws, and pointer that were removed in **STEP 6**. **NOTE: Adjust pointer to "zero" on the bevel index scale.**

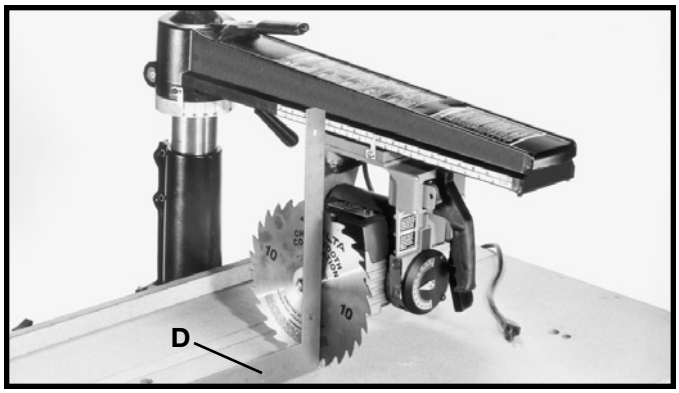

Fig. 41

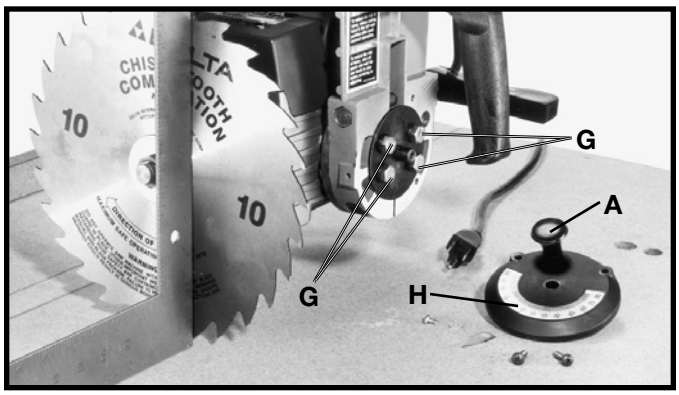

Fig. 42

ADJUSTING IN/OUT RIP SCALE

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE..**

2. Loosen yoke clamp handle (A) Fig. 43. Release yoke index by pressing yoke indexing release lever (B) up or down, and rotating cutting-head (C) to the in-rip position as shown. Tighten yoke clamp lever (A).

3. Position fence (D) Fig. 43, at the rear of table as shown.

4. Loosen cutting-head clamp knob (G) Fig. 48 and slide cutting-head (C) Fig. 43, to rear of track arm until saw blade (F) is flush against fence (D).

5. Tighten cutting-head clamp knob (G) Fig. 48 and adjust pointer (H) Fig. 43, if necessary, to "zero" mark on lower scale (J) by loosening screw (K). After adjustment is made, tighten screw (K).

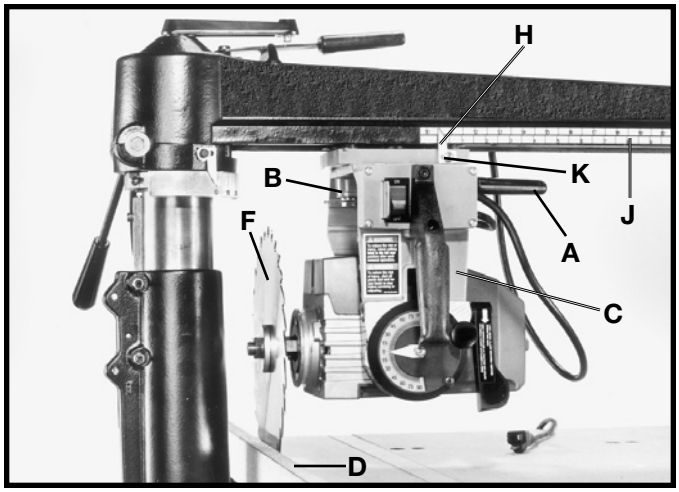

Fig. 43

ASSEMBLING BLADE AND BLADE GUARD

NOTE: USE ONLY 10" BLADES WITH 5/8" ARBOR HOLES AND RATED FOR 5000 RPM OR HIGHER.

1. Assemble the inside (thick) arbor flange (A) Fig. 44, onto the arbor shaft with the recessed side of flange (A) facing out.

2. With the blade guard (B) Fig. 45, in the left hand, insert saw blade (C) into the blade guard (B) and onto the arbor shaft.

3. Assemble the outside (thin) blade flange (D) Fig. 45, with the recessed side of flange (D) facing in and arbor nut (E) onto the arbor shaft. **NOTE: ARBOR NUT (E) FIG. 45, HAS A LEFT HAND THREAD.**

4. Lift cam (F) Fig. 46, and assemble blade guard (B) onto cutting-head assembly. **NOTE: MAKE CERTAIN TONGUE ON GUARD SEATS INTO GROOVE OF CUTTING-HEAD**.

5. Pull back on blade guard (B) Fig. 47, so that it rotates to the rear, and tighten arbor nut (E) using two wrenches (G) supplied. Place the 7/8" box wrench around the arbor nut (E), and place the 7/8" open end wrench on the flat on the arbor, to hold the arbor while removing the arbor nut.

6. Rotate blade guard (B) Fig. 46, to the horizontal position and tighten clamp knob (H). **IMPORTANT: CLAMP KNOB (H) FIG. 46, MUST BE TIGHT AND BLADE GUARD SECURE DURING OPERATION**.

⚠WARNING The lower retractable blade guard provides operator protection in an axial direction to the saw blade. Help eliminate potential hazards of the lower blade guard by using the following rules.

A) **KEEP YOUR HANDS AWAY FROM THE GUARD**. As the blade cuts, the guard will lift and leave part of the blade exposed.

B) **SHUT OFF POWER BEFORE FREEING A JAMMED LOWER GUARD**. The guard can get jammed in previous kerfs in table or fence. Always anticipate the path of the guard.

C) **USE CAUTION** when making bevel cuts to be sure the lower guard is never pinched towards the blade.

D) **THE LOWER GUARD CAN JAM AGAINST THE FENCE DURING NARROW IN-RIPS**. Should the guard jam against the fence, disconnect the saw from power, wait for the blade to stop, then lift the blade guard and rest it on top of the fence.

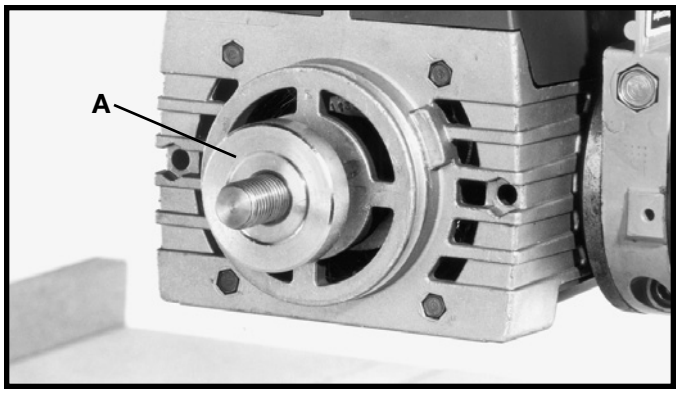

Fig. 44

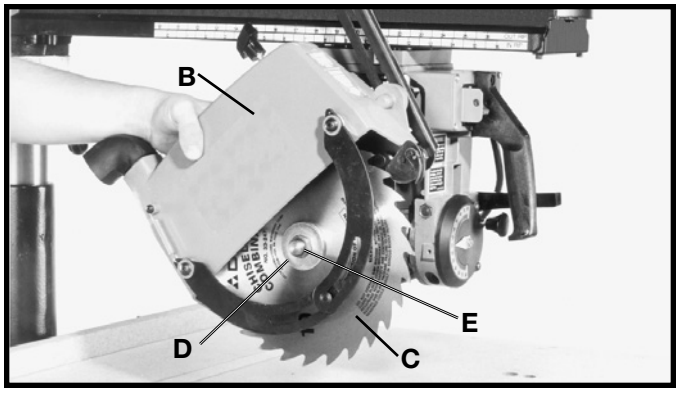

Fig. 45

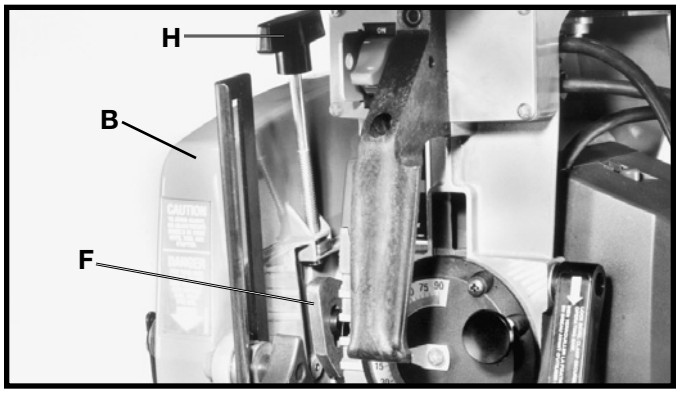

Fig. 46

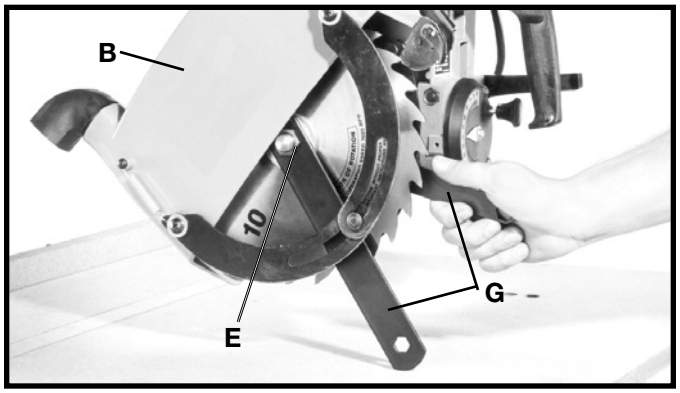

Fig. 47

CUTTING INTO TABLE BOARDS

1. Assemble table boards (A) Fig. 48, and fence (B) as shown and secure in place with table clamps, one of which is shown at (C).

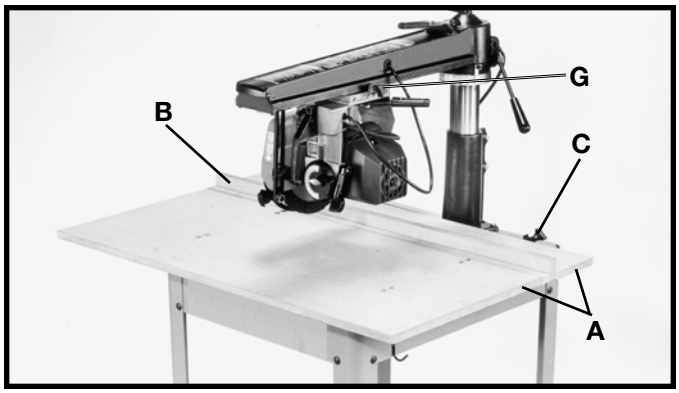

Fig. 48

2. Return cutting-head (D) Fig. 49, to rear of track arm (E), and tighten cutting-head clamp knob (G) Fig. 48. Make sure switch (H) Fig. 49, is in the **"OFF"** position and connect saw to power source.

3. While holding cutting-head handle (L) Fig. 49 firmly, turn switch (H) **"ON"** and lower track arm (E) by turning elevating handle (K) as shown. Lower saw blade until it cuts into the table surface approximately 1/16" deep. Then stop turning elevating handle (K).

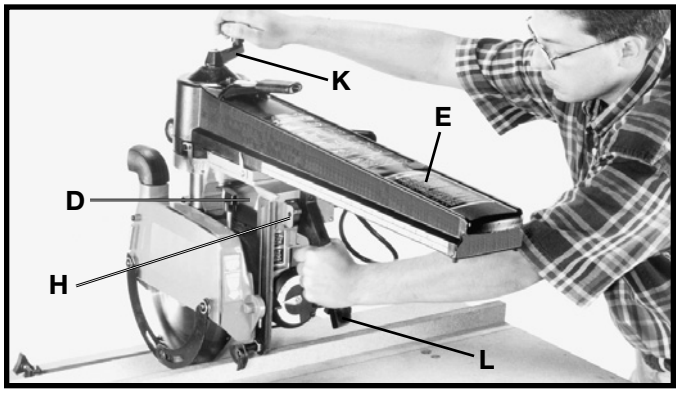

Fig. 49

4. While still holding cutting-head handle (L) Fig. 50 firmly, loosen cutting-head clamp knob (G) Fig. 48, and slowly pull cutting-head (D) Fig. 50, toward the front of the track arm (E) as shown, until travel stops. Then turn switch (H) "OFF".

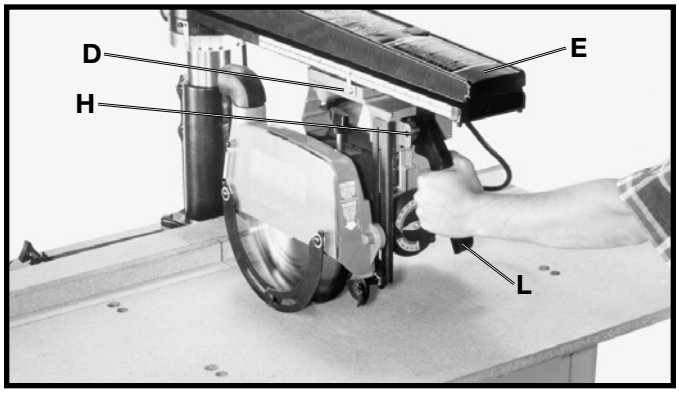

Fig. 50

5. Once saw blade (M) Fig. 51, has come to a complete stop, return cutting-head (D) to rear of track arm (E) as shown. Fig. 51, illustrates saw kerf (N) cut into table boards.

IMPORTANT: THE TRACK ARM (E) FIG. 51, MUST BE RAISED BEFORE ATTEMPTING TO ROTATE IT. ALSO, THE PROCEDURE "CUTTING INTO TABLE BOARDS" MUST BE PERFORMED FOR EACH ANGLE CUT DESIRED.

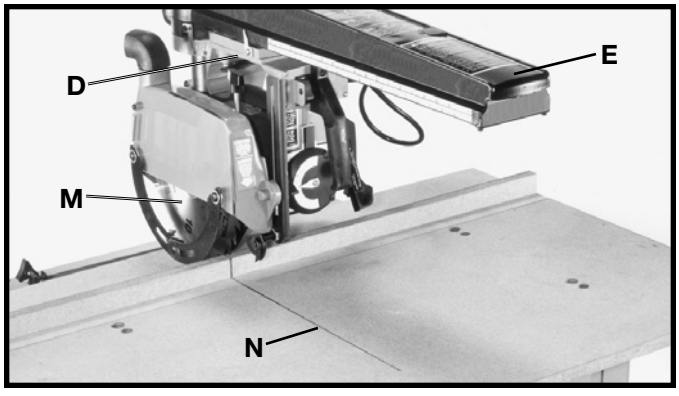

Fig. 51

FASTENING SAW TO THE FLOOR

If during operation there is any tendency for the saw to tip over, slide, or walk on the supporting surface, the saw should be secured to the floor surface through holes provided on the bottom of each leg.

OPERATION

OPERATIONAL CONTROLS AND ADJUSTMENTS

STARTING AND STOPING

The on/off switch (A) Fig. 56, is located at the front of the cutting-head. To turn the saw **"ON"** move the switch (A) Fig. 56, up to the "ON" position. To turn the saw **"OFF"** move the switch (A) Fig. 56, down to the "OFF" position.

⚠WARNING MAKE SURE THAT THE SWITCH IS IN THE "OFF" POSITION BEFORE PLUGGING IN THE POWER CORD. IN THE EVENT OF A POWER FAILURE, MOVE THE SWITCH TO THE "OFF" POSITION. AN ACCIDENTAL START-UP CAN CAUSE INJURY.

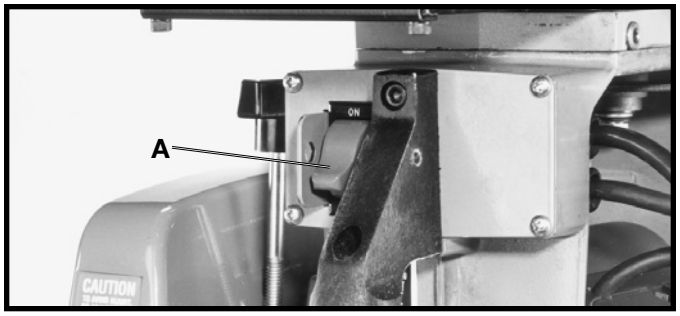

Fig. 56

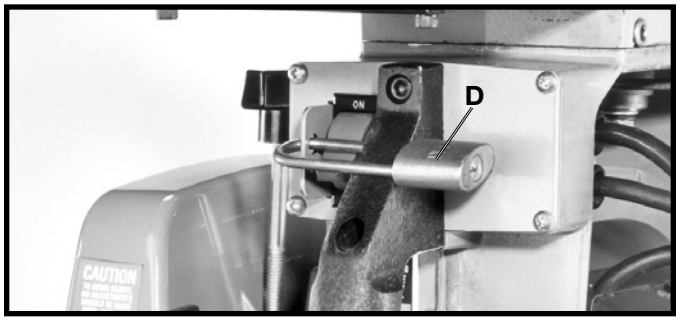

Fig. 57

LOCKING SWITCH IN THE "OFF" POSITION

IMPORTANT: When the machine is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use, using a padlock (D) Fig. 57 with a 3/16" diameter shackle.

ADJUSTING BALL BEARINGS AGAINST TRACK

The cutting-head (C) Fig. 61, is suspended from four pre-loaded, lubricated, shielded ball bearings, two of which are on fixed shafts at (A) , and two on adjustable shafts at (B). **NOTE: CUTTING-HEAD (C) FIG. 61, IS REMOVED FROM TRACK ARM FOR ILLUSTRATION PURPOSES ONLY. DO NOT REMOVE CUTTING-HEAD FROM TRACK ARM!**

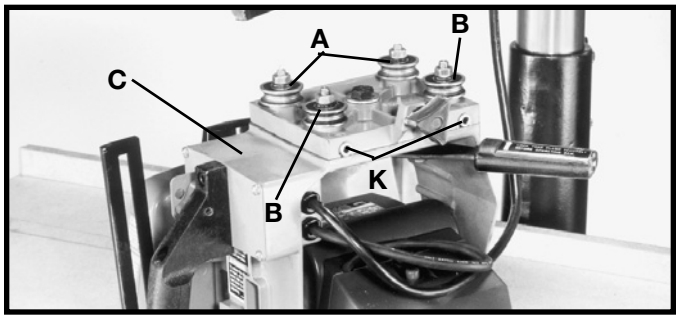

Fig. 61

After extended use, wear may develop in the track arm, causing "play" between the ball bearings and the track. The ball bearings must ride smoothly and evenly in the channels of the track arm. Adjustment to the two bearings on adjustable shafts can be made as follows:

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.

2. Remove plastic plug (D) Fig. 62, from the top of track arm (E).

Fig. 62

3. Slide cutting-head (C) Fig. 63, until one of the adjustable bearings (B) Fig. 60, is visible through hole (G) Figs. 62 and 63.

4. Using a 1/2" socket, extension, and ratchet (H) Fig. 63, through hole (G) in track arm, slightly loosen hex nut on adjustable shaft (B) Fig. 61, approximately 1/8 turn. Repeat procedure for other bearing.

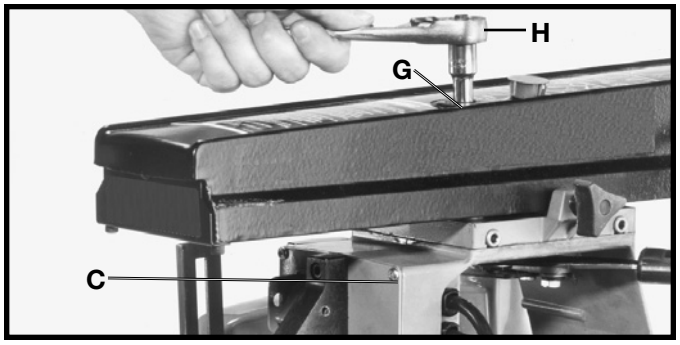

Fig. 63

5. Using a 3/16" Allen wrench (J) Fig. 64, turn adjustment screws (K) Figs. 61 and 64 to remove all "play." **NOTE: DO NOT OVERTIGHTEN ADJUSTMENT SCREWS (K). THIS CAN DAMAGE BEARINGS**.

⚠WARNING DO NOT LOOSEN ADJUSTMENT SCREWS (K) MORE THAN 1/2 TURN. THE CUTTING-HEAD MAY FALL FROM THE TRACK ARM.

6. Tighten two hex nuts which were loosened in **STEP 4**, and check cutting-head travel for any "play" and to ensure it moves freely and smoothly.

7. When adjustments are complete, replace plastic plug which was removed in **STEP 2**.

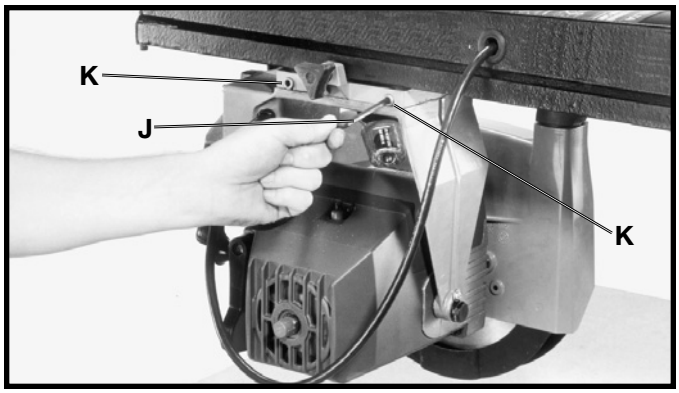

Fig. 64

ADJUSTING TENSION ON ELEVATING COLUMN

Elevating column tension is preset at the factory. It can be adjusted to remove any "play" which may develop after extended use. Adjustments can be made as follows:

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.

2. Loosen hex nuts (A) Fig. 65, and gib adjustment screws (C).

3. Adjustment to column base (B) Fig. 65, is made by loosening hex nuts (D) and turning screws (E) until column base wraps around column securely and can be raised or lowered without binding. Then tighten hex nuts (D) against column base.

4. After all movement between column base (B) Fig. 65, and elevating column (F) is removed, tighten gib and adjustment screws (C) against gib (H) until all side-to-side play is removed. Then tighten hex nuts (A) against column base. **NOTE: After adjusting column tension, refer to "ADJUSTING SAW BLADE TRAVEL SQUARE WITH FENCE" to determine if saw blade travel was affected.**

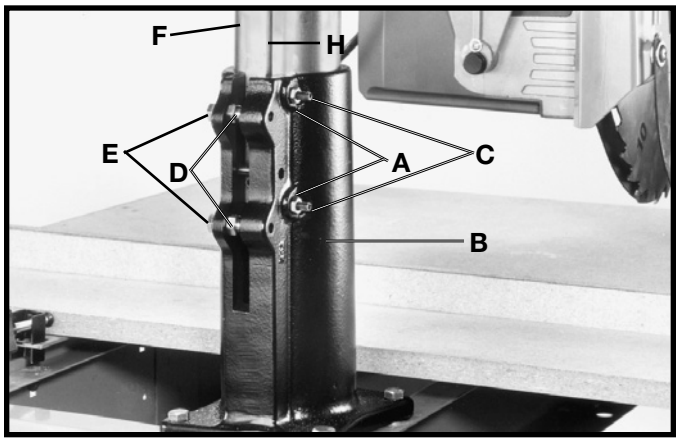

Fig. 65

CHANGING POSITION OF TRACK ARM CLAMPING HANDLE

When the track arm clamping handle (A) Fig. 66, does not lock in a convenient position, it may be repositioned as follows:

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.

2. Loosen and remove track arm clamping lever (A) Fig. 66, and push hex bolt (B) Fig. 67, back through hole until head of bolt is out of the recessed bushing (C) as shown. **NOTE: Track arm clamping lever has left hand thread.**

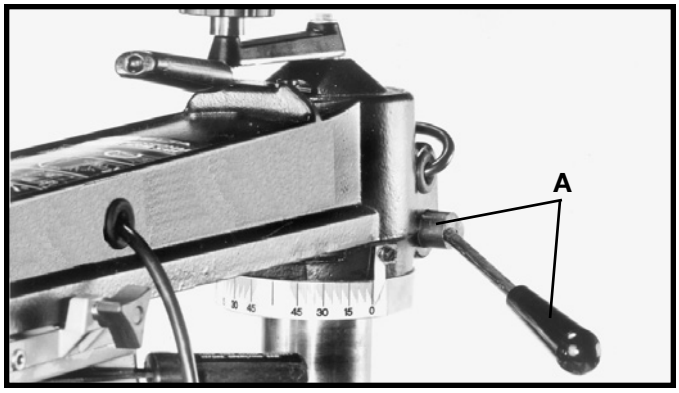

Fig. 66

3. Rotate hex bolt (B) Fig. 67, in the desired direction which the handle needs to be turned.

4. Push hex bolt (B) Fig. 67, back through hole. Make certain head of hex bolt is seated properly in recessed bushing (C), and reassemble track arm clamping lever. **NOTE: If track arm clamping lever (A) Fig. 66, tightens before approximately four turns, it is possible the clamping bushings, one of which is shown at (C) Fig. 67, may have rotated. These bushings should be seated completely inside track (D) as shown. If they are not, slightly loosen clamping lever (A) Fig. 66, and rotate clamping bushing (C) Fig. 67, until it seats properly into track (D) as shown. It may be necessary to rotate bushing on clamp lever side also. Fig. 68, illustrates track arm clamping lever assembly unassembled for illustration purposes only. The flats (E) Fig. 68, on clamping bushings (C) should face the front of saw.**

NOTE: Clamp lever (A) Fig. 68, will begin to thread at one of two positions. If after making the adjustment the clamp lever (A) tightens 180 degrees from where desired, slowly unscrew clamp lever (A) while holding in on hex bolt (B). When the clamp lever (A) comes off hex bolt (B), rotate clamp lever (A) 180 degrees. Then start to tighten clamp lever (A).

CHANGING POSITION OF BEVEL CLAMP HANDLE

When the bevel clamp handle does not lock in a convenient position, it can be repositioned as follows:

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.

2. Loosen bevel clamp handle (A), release bevel index release knob (B), and turn motor (C) to vertical position as shown in Fig. 69. **NOTE: IF BLADE GUARD CONTACTS TABLE SURFACE, RAISE TRACK ARM**.

3. Loosen bevel clamp handle (A) Fig. 69, several turns, until hex head of screw (D) can be pushed out of hex-shaped recess in yoke.

4. Turn screw (D) Fig. 69, in the direction the handle needs to be turned, one or two flats of the hex head and push it back into hex-shaped recess in yoke.

5. Tighten bevel clamp handle (A) Fig. 69. **NOTE:** Screw is left hand thread - turn clamp handle counterclockwise to tighten.

CHANGING POSITION OF YOKE CLAMP HANDLE

When the yoke clamp handle (A) Fig. 70, does not lock in a convenient position, it can be repositioned as follows:

1. **⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE**.

2 Remove retaining ring (B) Fig. 70.

3. Reposition yoke clamp handle (A) Fig. 70, on hex clamp nut.

4. Replace retaining ring (B) Fig. 70.

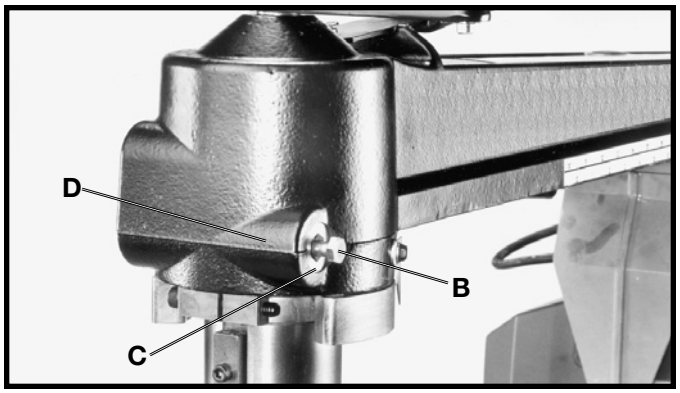

Fig. 67

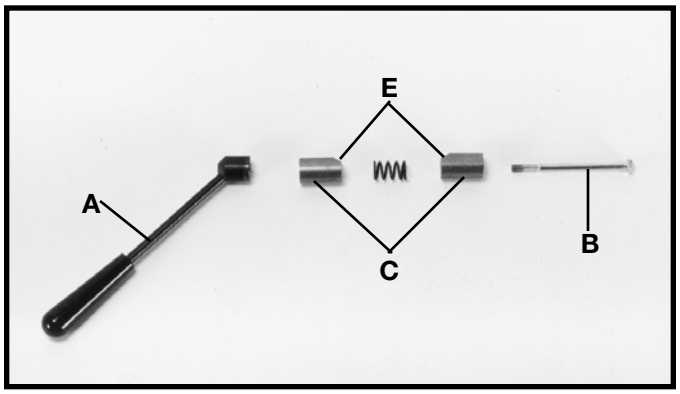

Fig. 68

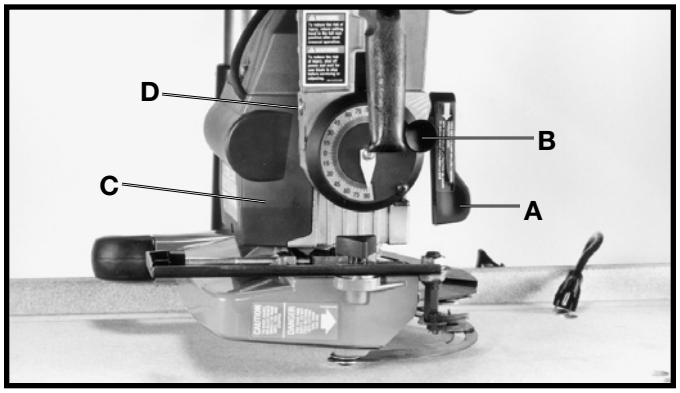

Fig. 69

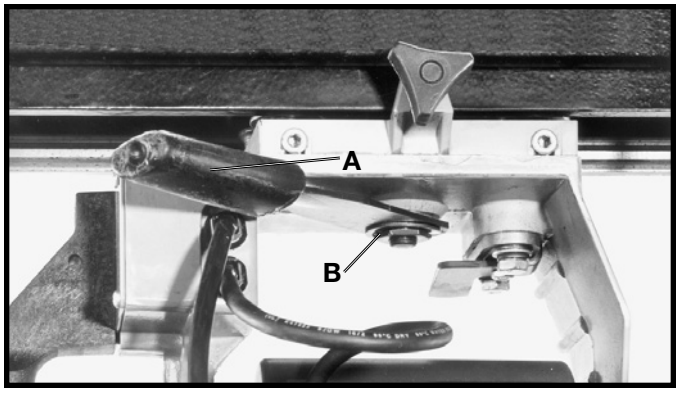

Fig. 70

POSITIVE STOP YOKE INDEX

Yoke index lever (A) Fig. 71, activates a positive stop which positions the cutting-head in the cross-cut or rip position. To rotate the cutting-head, release yoke clamp handle, press up or down on yoke index lever (A), releasing the positive stop, and rotate the cutting-head to the #1 in-rip or #2 out-rip or #3 cross-cut positions as desired. Release the yoke index lever (A) Fig. 71, and the cutting-head will automatically index at each of the three positions above.

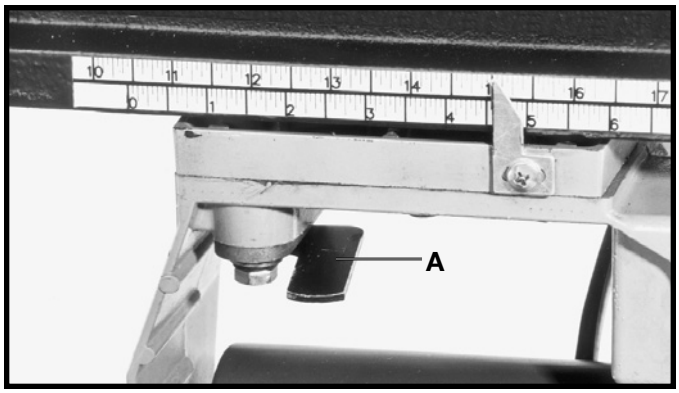

Fig. 71

POSITIVE STOP BEVEL INDEX

Bevel index knob (A) Fig. 72, provides a positive stop when positioning the saw blade at zero, 45°, and 90° left, and 90° right on the bevel scale (C). To change the angle of the saw blade, loosen bevel clamp handle (B), pull out bevel index knob (A) and tilt saw blade and motor. For zero, 45°, and 90° left, and 90° right positions, release bevel index knob (A) and saw blade will index at each of these positions. Then tighten bevel clamp handle (B). For saw blade angles between positive stops, set blade at desired angle on bevel scale (C) and tighten bevel clamp handle (B) Fig. 72.

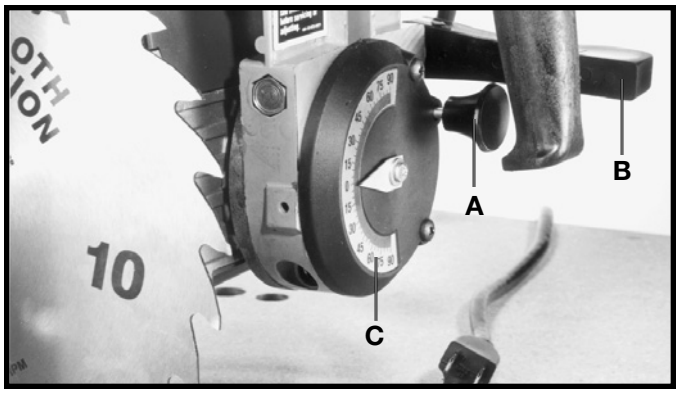

Fig. 72

ADJUSTING SPLITTER AND ANTI-KICKBACK FINGERS

During ripping operations, the splitter (A) Fig. 73, must ride in the saw kerf and the anti-kickback fingers (B) should be touching the workpiece to prevent kickback.

1. Set the saw up in the ripping position with the blade guard lowered on the in-feed side to act as a holddown.

2. Start a piece of material through the saw as shown in Fig. 73.

3. **⚠ WARNING SHUT SAW OFF, AND DISCONNECT FROM POWER SOURCE**.

4. Adjust the arm (C) Fig. 73, so that it is vertical and the splitter (A) is in the saw kerf.

5. If the splitter (A) Fig. 73, does not line up with the saw kerf, loosen hex nuts (D), and position splitter (A) into saw kerf as shown. Then tighten hex nuts (D) against arm (C). The straight side of the splitter should be toward the blade as shown in Fig. 73, and the anti-kickback fingers should rest on the workpiece as shown. **NOTE: The clamp knob for arm (C) must be tight. Move arm (C) front to back while tightening clamp knob with other hand to be sure clamp is firmly seated and tight**.

6. Pull backward on the workpiece to determine if the anti-kickback fingers bite into the material and prevent further backward movement. If necessary, readjust height of arm (C) Fig. 73.

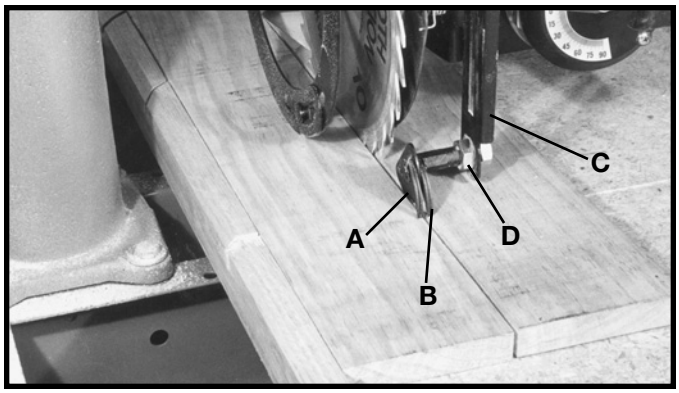

Fig. 73

AUXILIARY TABLE BOARD FACING

To prevent repeated cutting into the table surface which will eventually cause the table to sag, an auxiliary table board facing can be cut and fitted to the table. It can be made from 1/4" plywood or particle board and should be cut to a size that will exactly cover all of the table boards in front of the fence. The auxiliary table board facing should be placed flat on the table and butted against the table fence. Fasten it to the table with a small brad or finish nail in each corner. The life of the table boards will be greatly extended by the use of an auxiliary facing.The auxiliary facing can readily be replaced as often as is necessary to protect the table boards and to insure accurate and safe work.

USING A TABLE EXTENSION

When a table extension more than 24 inches long is attached to the saw, a sturdy outrigger support should be provided or the stand or bench must be secured to the floor.

MACHINE USE

CROSS-CUTTING

The first operation which should be learned on the radial saw is cross-cutting (Fig. 76). Cross-cutting consists of supporting the workpiece against the fence and pulling the saw blade through the material at right angles to it. When cross-cutting, the track arm should be indexed at “0” and the track arm clamp handle tightened. The fence should be clamped between the table boards. The saw blade is to be to the left and behind the fence. The workpiece is placed on the table and butted against the fence. The saw blade should be clear of the fence and table when the machine is turned on. Then the saw blade is lowered until it lightly cuts into the table surface. The operator should position himself a little to the left of the machine for better visibility while cutting. Pull the saw blade across the work, just far enough to cut it off, and return the saw blade to its starting position. Turn tool off. and wait for the blade to stop before touching the cut-off piece.

⚠WARNING THE OPERATOR MUST ALWAYS BE CONSCIOUS OF WHERE HIS HANDS ARE; THAT THEY ARE CLEAR OF THE BLADE AND HOLDING THE WORKPIECE FIRMLY.

As an added measure of operator safety, since the splitter and anti-kickback fingers are not used in the cross-cutting operation, the anti-kickback rod can be turned upside down and locked in place so the rod just clears the workpiece. In this position the rod can act as a guard from the exposed teeth of the blade. Fig. 76 shows a cross-cutting operation on a radial saw.The operator should always be sure to return the cutter-head carriage to the full rear position after each cross-cut operation.

NOTE: When cross-cutting material more than 1" thick, the fence must be positioned immediately behind the fixed front table board.

Fig. 76

CROSS-CUT STOP

A block of wood (B) Fig. 77, clamped to the track arm with a small clamp will prevent unnecessary travel of the cutting-head on the track arm. This is especially useful when performing repetitive operations. Clamp the block of wood to the right side of the track arm at a position which will stop the cutting-head travel as soon as the saw blade cuts through the workpiece.

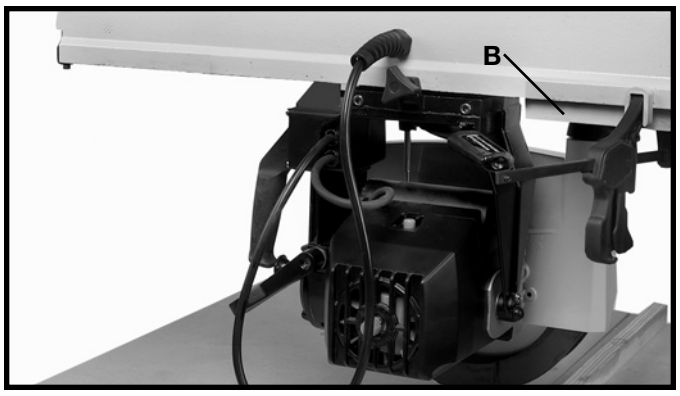

Fig. 77

Fig. 78

MITER CUTTING

Miter cutting is similar to cross-cutting except the workpiece is cut off at an angle (up to 45 degrees right or left) rather than being cut off square. The settings and operation are performed in the same manner as cross-cutting except that the track arm is first positioned to the desired angle on the miter scale before it is clamped in place. The operator should position the hand holding the workpiece on the opposite side to the direction of the miter so the blade is pulled through the workpiece and away from the hand. Fig. 78, shows a typical miter cutting operation on the radial saw.

COMPOUND MITER CUTTING

Compound miter cutting is performed in the same manner as miter cutting except the saw blade is also tilted to cut a bevel. The settings and operation are similar to miter cutting except that the blade is first tilted to the desired angle on the bevel scale before it is clamped in place. Fig. 79, shows a compound miter cutting operation on the radial saw.

Fig. 79

RIPPING

IMPORTANT: In certain applications it may be necessary to use two push sticks, and/or featherboards. Also, if a push stick or other feeding device is necessary to assist in the feeding of material, make certain it is conveniently located so it may be reached easily without having to stretch or reach near the blade.

Ripping involves making a lengthwise cut through a board along the grain. When ripping, the track arm is clamped at "0" on the miter scale. The yoke is then positioned and clamped so that the blade is parallel to the fence in either the inboard or outboard position. When feeding the material, one edge rides against the fence while the flat side of the board rests on the table. The guard should be lowered on the in-feed side until it almost touches the workpiece, as shown in Figs. 80 and 81, to act as a holddown. The splitter and anti-kickback fingers (A) Fig. 80, should be adjusted as described under the section **"ADJUSTING SPLITTER AND ANTI-KICKBACK FINGERS"** in this manual. The operators hands should always be well away from and to the side of the blade. When ripping narrow work, always use a push stick as shown in Fig. 81, to push the work between the fence and blade. The workpiece must have one straight edge to follow the fence. If board is bowed, place hollow side down. The cutting-head clamp knob should be securely tightened for all ripping operations.

Fig. 80

⚠DANGER THE MATERIAL MUST NEVER BE FED INTO THE OUTFEED END OF THE BLADE GUARD.

OUT-RIPPING

Out-ripping involves all of the general conditions stated above. The yoke is clamped at right angle to the track arm with the blade guard facing the front of the machine. The cutting-head is positioned on the out-rip scale to the desired setting and clamped in position. The workpiece is fed from the left side of the saw. Fig. 80, shows a typical out-ripping operation on the radial saw.

IN-RIPPING

In-ripping involves all of the general conditions stated under **RIPPING**. The yoke is clamped at right angle to the track arm with the blade guard facing the rear of the machine. The cutting-head is positioned on the in-rip scale to the desired setting and clamped in position. The workpiece is fed from the right side of the saw. Fig. 81, shows a typical in-ripping operation on the radial saw.

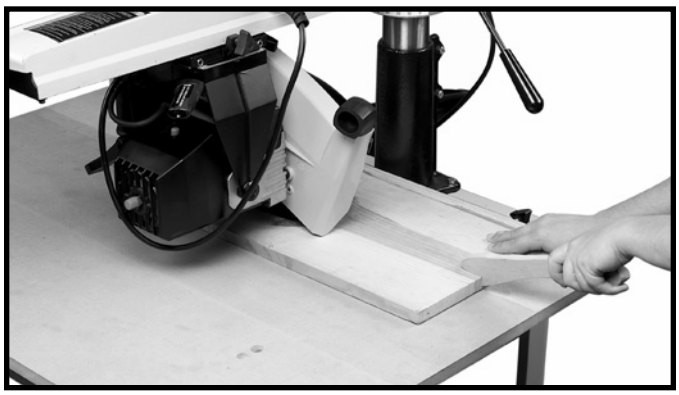

Fig. 81

⚠WARNING WHEN RIPPING WORK LESS THAN FOUR INCHES WIDE, A PUSH STICK SHOULD BE USED TO COMPLETE THE FEED (SEE FIGS. 81 & 83)

CONSTRUCTING A PUSH STICK

When ripping work less than 4 inches wide, a push stick should be used to complete the feed and could easily be made from scrap material by following the pattern shown in Fig. 83.

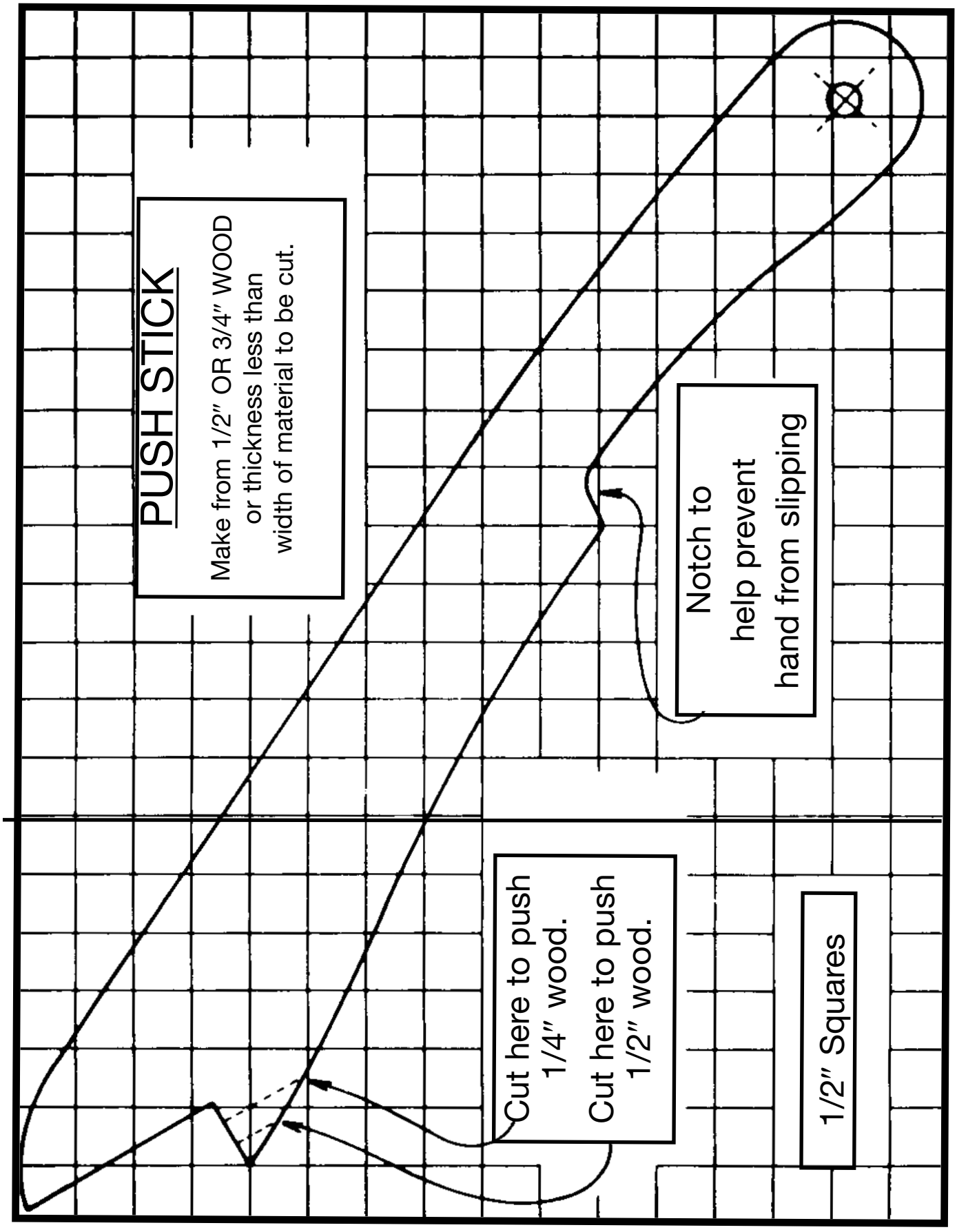
PUSH STICK
Make from 1/2" OR 3/4" WOOD or thickness less than width of material to be cut.
Notch to help prevent hand from slipping
Cut here to push 1/4" wood.
Cut here to push 1/2" wood.
1/2" Squares

Fig. 83

TROUBLESHOOTING

For assistance with your machine, visit our website at **www.deltamachinery.com** for a list of service centers or call the DELTA Machinery help line at 1-800-223-7278 (In Canada call 1-800-463-3582).

MAINTENANCE

OVERLOAD PROTECTION

The motor on your saw is equipped with an overload relay (A) Fig. 82. If the motor shuts off or fails to start due to overloading, or low voltage, turn the switch to the **"OFF"** position, let the motor cool three to five minutes then push the reset button (A). The motor can then be turned on again in the usual manner. Some conditions that may cause overloading are; cutting stock too fast, using a dull blade, using the saw beyond its capacity, etc.

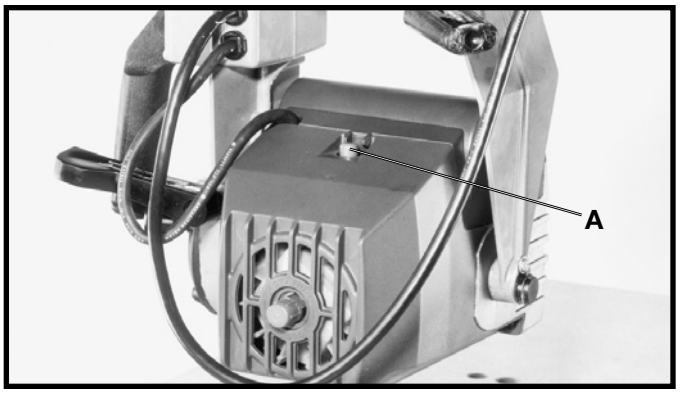

Fig. 82

KEEP MACHINE CLEAN

Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

⚠WARNING **Wear ANSI Z87.1 safety glasses while using compressed air.**

FAILURE TO START

Should your machine fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

LUBRICATION

Apply household floor paste wax to the machine table and extension table or other work surface weekly.

PROTECTING CAST IRON FROM RUST

To clean and protect cast iron tables from rust, you will need the following materials: 1 pushblock from a jointer, 1 sheet of medium Scotch-Brite™ Blending Hand Pad, 1 can of WD-40®, 1 can of degreaser, 1 can of TopCote® Aerosol. Apply the WD-40 and polish the table surface with the Scotch-Brite pad using the pushblock as a holddown. Degrease the table, then apply the TopCote® accordingly.

SERVICE

DELTA

PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of Porter-Cable • Delta Factory Service Centers and Delta Authorized Service Stations. To obtain additional information regarding your Delta quality product or to obtain parts, service, warranty assistance, or the location of the nearest service outlet, please call 1-800-223-7278 (In Canada call 1-800-463-3582).

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site **www.deltamachinery.com** for a catalog or for the name of your nearest supplier.

⚠WARNING Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.

WARRANTY

Two Year Limited New Product Warranty

Delta will repair or replace, at its expense and at its option, any new Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. For all refurbished Delta product, the warranty period is 180 days. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.

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(CENTROS DE SERVICIO DE PORTER-CABLE • DELTA)

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Fax: (858) 279-0362

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Fax: (510) 357-7939

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Fax: (303) 922-0245

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Unit #107
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Fax: (954) 321-6638

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Phone: (813) 884-0434
Fax: (813) 888-5997

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Fax: (314) 997-9183

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1948 Schrock Road
Phone: (614) 895-3112
Fax: (614) 895-3187

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(Philadelphia)
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Fax: (972) 446-8157

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536 East Tidwell Rd.
Phone: (713) 692-7111
Fax: (713) 692-1107

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3320 West Valley HWY, North
Building D, Suite 111
Phone: (253) 333-8353
Fax: (253) 333-9613

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